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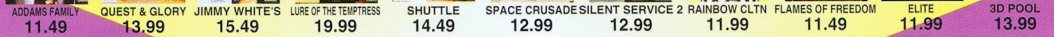
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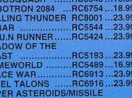


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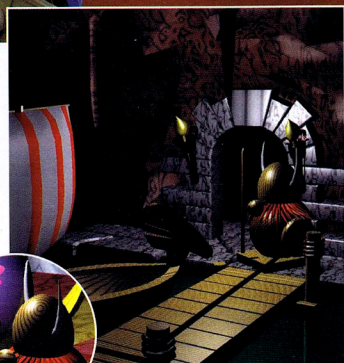
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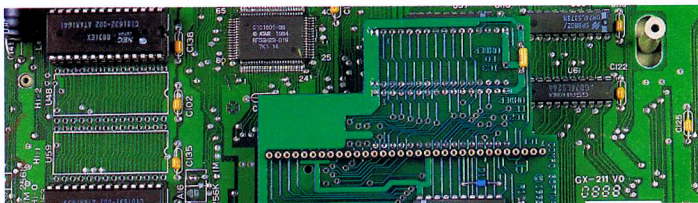
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turn to page 21



CREATE THE ULTIMATE ST GRAPHICS

With Xenomorph, check out our review on page 40



IMPROVE YOUR ST'S PERFORMANCE!

Upgrade your operating system on page 31

SCREENPLAY

Fully completed and reviewed this month...

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Find out how you can save Lee from being squashed in Sleepwalker on page 64.

World Class
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ST FORMAT ■ ISSUE 47 ■ JUNE 1993

WELCOME TO ST FORMAT!



Paula Richards,
EDITOR

The ST scene is changing pretty rapidly these days. One second things are looking decidedly peaky and the next, sunshine is beaming through the window. What with you switching your loyalties to the independent retailers and games producers starting to produce excellent quality games for the ST – read about both of these stories in the news on page 7 – things are looking up. There have been further developments

on the STFM story we reported last month – see page 48 for more details. To tie in with our exclusive *Legends of Valour* demo on the Cover Disk (see page 12 for more details), we're looking at the whole arena of adventure games on page 21.

If you would like your ST to be emulating near-Falcon performance, check out our step by step guides to upgrading your operating system on page 31. Aside from these, there's the usual blend of definitive reviews, hints, tips and useful tutorials to make life on your ST that much more exciting – I hope you enjoy it.

FEATURES

21 LET THE GAMES GRIP YOU!

Playing adventure games is one of the most engrossing ways to spend your time. We tell you exactly why you should get into this absorbing genre.

31 TRANSFORM YOUR TOS

The advantages of upgrading your version of TOS are huge. Find out which upgrade to choose and how you should combine it with your ST for best results.

38 THE SEQUENCE OF EVENTS

First we gave you *Pro-12* on Cover Disk 39, and now we show you how to make beautiful music with this sequencer.

REGULARS

7 NEWS

Why are the independent ST retailers doing so well these days? And what delights does the games industry have in store for you this year?

12 COVER DISK

Get the most out of each of the ten programs on the Disk with our indispensable guides.

34 REVIEW: HP PORTABLE DESKJET

Just why would you want to take this portable inkjet printer on holiday with you?

36 REVIEW: ALFADATA HAND SCANNER

How easy is it to create incredible graphics with this convenient hand scanner?

40 REVIEW: XENOMORPH

Create the ultimate in ST graphics with this fantastic raytracing package.

42 REVIEW: EASY TEXT PROFESSIONAL

This desktop publishing program seems good value, but can it actually do the job?

44 REVIEW: BREAKTHRU

Discover the delights of ST music with this sequencer and its big brother, *Breakthru Plus*.

47 REVIEW: BIZ ACCOUNTS

See if this program can control your finances.

50 SUBSCRIBE!

You win every time with ST FORMAT.

48 ATARI FIGHT BACK

Atari explain precisely why they've dropped the price of the STFM and how they're supporting the ST.

86 THE BYTECRUNCHER'S GUIDE TO ASSEMBLY

Make your programs easier to use by including menus and windows. Discover how to get them in here!

87 HIGH RESOLUTION ARTISTRY

We give you some hints on how to use PAD 2.

98 ST MAKES THE FRONT PAGE

A school in Africa wins awards thanks to an ST.

105 THIS IS YOUR VIEW

So, what do you really think of ST FORMAT?

52 BACK ISSUES

Your chance to order the STFs you may have missed.

54 ST ANSWERS

We solve scores of your technical ST difficulties.

63 SCREENPLAY

Reviews of the latest in ST games start here.

74 GAMEBUSTERS

The solutions you've been waiting for could be here, ready to brighten up your day.

80 REVIEWS: FALCON SOFTWARE

Musicon and *True Paint* for the Falcon are finished! But exactly how good are they?

81 NEXT MONTH

What joys does STF have for you next month?

84 SPECIAL OFFERS

You can save money and get yourself a bargain at the same time with our brilliant ST offers.

90 PUBLIC SECTOR

The Public Domain's crammed with incredible software – here's just a small selection.

96 FOOTLOOSE AND FANCY FREE

Here are the programs from the people who prefer to distribute them themselves.

101 FEEDBACK

We respond to your comments, complaints, observations and, er, totally daft remarks.

106 LIFE, THE UNIVERSE AND EVERYTHING

The waifs and strays of ST FORMAT congregate here.

COVER DISK 47



10 GREAT PROGRAMS!

Here's just a selection of the delights that wait to greet you on this month's Cover Disk



■ Your chance to experience revolutionary texture mapped graphics in this exclusive demo.

■ *Legends of Valour* – an exclusive playable demo of the next brilliant RPG to hit your screens.

■ *Galaxian* – blast those aliens!

■ *Stomp* – puzzle yourself into extreme frustration

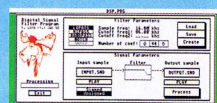
■ *Stomp* will make you kick and shout in frustration.



■ *Abominaball* – 50 levels of this addictive arcade puzzle game

■ Boing, boing, boing, boing, boing. Booom!

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TURN TO PAGE 12 FOR FULL DETAILS!

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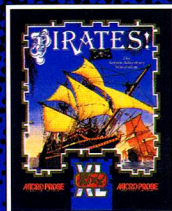
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Some software titles have different titles on different computers and need the wrong graphics which vary considerably. Software titles are subject to change without notice and are subject to the computer specifications.

Independents take the market by storm

by Paula Richards

More and more people are going to their local friendly independent ST dealer rather than to the chain stores to buy ST software, according to well-placed industry sources.

Although one of the reasons for this shift of loyalty is undoubtedly the fact that it's harder to get ST software from the main high street shops, there is also the fact that Atari's presence has become more noticeable since the launch of the Falcon – people at last seem to be sitting up and taking notice. Andy Leaning, the marketing manager of Silica Systems and SDL, one of Atari's main distributors, agrees: "Since the introduction of the Falcon there has certainly been a rise in the interest of Atari products in general and particularly for software. It would seem that the launch of the Falcon has revitalised the Atari market and users at all levels – developers and dealers are now more optimistic about the

It would seem that the launch of the Falcon has revitalised the Atari market and users at all levels

**Andy Leaning,
Silica Systems**

future of the ST than they have been for some time."

Sizeable upturn

SDL have around 200 dealers in the UK and they've noticed that the sales of ST software have shown a "sizeable upturn on what it's been previously." He puts this down to existing ST owners wanting to upgrade to Falcons, rather than any other home computer, because they know they're going to get quality machines from Atari. These new Falcon owners have sold on their STs which is creating a "new wave of first generation ST owners who are forming the second hand market."

Spurred on by this increased optimism and higher levels of activity within the ST software market, he reckons the £159 STFM is going to sell "very very well" making the ST a more attractive proposition for software houses to produce games and software for it.

Selling all the Falcons

John Appleton of Spire Technology, another of Atari's main distributors who supply independent retailers, agrees, citing the example of the Falcon – they're "very pleased" with the way the Falcon is selling – all of the machines they have received from Atari have gone out to the shops. He also suggests that they expect to be able to sell many of the £159 STFMs, believing that there's a "massive potential market" out there for it. He describes the move by Atari as "very aggressive – you get a proper computer at a console price." Of course, he supports independent retailers – they're often able to give a better service

■ The introduction of Atari's Falcon seems to be stirring up the ST software industry.



■ Silica Systems, who exist alongside the distribution company SDL have noticed a "substantial increase" in sales of ST software.

than can the chain stores since people who work in independents are often more

knowledgeable and have an active interest in computers – for chain store employees computers are only part of a line of stock. Conveniently the strength of the independents ties in with Atari's plan to sell 150,000 STFMs by the end of the year. Atari consider that independent retailers can better serve the

needs of discerning ST buyers who appreciate the back up and advice independents can give them.

STOP PRESS!
As we go to press, Atari announce further inroads into Europe with the opening of a new distribution centre in Holland to improve European customer service.

Microprose go to war

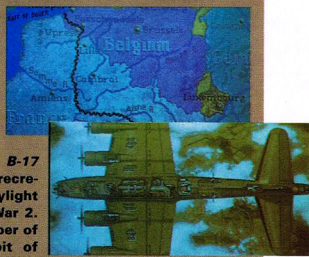
Flight-sim specialists Microprose follow up their *FORMAT GOLD* winning god sim *Civilization* with two new air war scenarios for the ST.

Ancient Art of War in the Skies combines arcade and war game elements in over 40 missions of dogfighting mayhem and derring-do. You have to take on illustrious enemies like the Red Baron and General Foch and destroy their capital cities, airfields and airforce in a bid for air supremacy.

■ Get involved in the battle for air supremacy with Microprose's *Ancient Art of War in the Skies*.

Another planned release is *B-17 Flying Fortress* – a 3D vectored recreation of the US Air Forces' daylight raids over Europe during World War 2. You can take control of any member of the ST-controlled crew for a bit of shoot-'em-up or flight-sim action as well as monitoring your aircraft and crew's performance during a raid.

Ancient Arts is available now, with *B17* following in June. Both games cost £34.99 and will be available from Microprose ☎ 0666 504326. Watch out for the reviews in future issues of *ST FORMAT*.



■ Flight sims keep getting bigger and better – infiltrate Occupied Europe with the help of B17 Flying Fortress.

BITS...

Lights, camera, action!

Hands On MIDI Software have come up with an eight channel MIDI controlled lighting rig called the Limelite. You control it via a MIDI sequencer using note-on and velocity information to select channel and light intensity.

Lights on each channel can be faded, dimmed, strobed, chased or pulsed and the unit includes eight function modes, 32 intensity levels, 50 preset scenes, 30 preset MIDI to light channel assignments, 16 preset chase sequences, strobe mode and a preset ambient lighting mode.

The Limelite costs £450 or you can buy a full lighting rig for £999.95. Call Hands On on 0705 221162.

Ch-Ch-Changes

Because some sequencers can't save Type 0 MIDI files correctly, Hands On have developed an ST utility called *Zero Gen*. It converts any Type 1 MIDI file to a Type 0 file with the option of leaving out particular MIDI channels. It costs £14.95 from Hands On MIDI Software on 0705 221162.

How much?

12MBytes of RAM in your ST? It is possible to get that much RAM into any ST with Marpet Developments' new Xtra-RAM+8 memory upgrade boards. However, your ST must already have 4MBytes of RAM and TOS 2.06 installed - if you don't have TOS 2.06, then take a look at our special upgrade feature on page 31 for details of the easiest way to upgrade your machine. The new boards will use standard SIMMs, either 1MByte or 4MByte depending which machine you own, and will be solderless on all machines except for some STfMs. The boards are priced at £109.99 without RAM installed or £399 with 8MBytes of SIMMs. Call Marpet Developments on 0423 712600 for more information.

HiSoft take command

HiSoft have taken over the trading arm of 2-Bit Systems Ltd. Audio Visual Research (AVR) who are best known for their high quality sound samplers, like Stereo Master and for their innovative Video Master combined digitiser and sound sampler. The brains behind AVR, Tony Racine and Dave Woodhouse, are now working at HiSoft-AVR as technical managers and will continue to develop hardware packages for the ST range.

HiSoft will be producing and distributing the AVR hardware and Microdeal will continue with the marketing end of the business. For further details contact David Link at HiSoft on 0525 718181.

GLORIOUS

by Paula Richards

The games scene is looking far more healthy than it has done for some considerable time, STf can confirm following this spring's European Computer Trade Show.

Software houses appear to be approaching the ST from two main angles. First they are concentrating on creating new quality games and second they are expanding their ranges of budget software. This shows their major commitment to the ST, suggesting that the machine will be supported for years to come.

Quality comes first

We were frequently told "we're only going to release the ST conversion if it's good enough." This is an excellent state of affairs meaning that you pay for great playability, addictiveness - and the biggest titles going. This support comes from across the board. To take an extreme example, look at Millennium (0223 844894). Ian Saunter of the company explained how they had taken the couple of months or so to convert *James Pond 3* on to the ST, but then, when it was finally completed decided the scrolling wasn't good enough for your discerning tastes and resolved not to release it at all.

Zool - Ninja of the Nth Dimension from Gremlin (0742 753423), that superbly hyped plat-

form game is also definitely coming out on the ST in September. After months of doubt and speculation this game which has been billed as, among other sales-speak adjectives, "demanding, mega awesome and full of unexpected treats" is to make an appearance - and there's even going to be an STE-enhanced version.

Virgin (081 960 2255) have a helicopter sim, *Apocalypse*, on the cards; they also suggest you "get ready to play the devil" in the war game *Cannon Fodder* - it's enhanced by incredible sound effects - they reckon you're even going to be able to hear the parrots squawk and the cicadas chirp. Domark (081 780 2222) are preparing to release the *Flight Sim Toolkit* so you can create your own unique flight sim with your choice of world, aircraft and even cockpit. Digital Integration (0276 684959) are releasing a combat flight sim which has been designed based on experience from the Royal Air Force and British Aerospace, as well as *Goblins 3*. If you're a soccer fan, you'll be pleased to hear that

■ *Ishar* is the first game that's been specifically converted to run on the Falcon - but there are more to follow.



Atari go on show

by Clive Parker

In line with Atari Germany's popularity, the company's presence in Hannover at the massive CeBit show was huge.

The stand alone housed a tubular geodesic dome and 60 individual show areas displaying the latest Atari software and hardware available and under development. The whole show was an enormous event - Hannover boasts the biggest exhibition centre in Europe, and well over 600,000 people turned up

■ The Atari dome seen from above. Although large and impressive, the Atari stand was tucked away in a corner of hall seven. We never did find the Commodore stand.

from all over the world to have a look around or exhibit their goods.

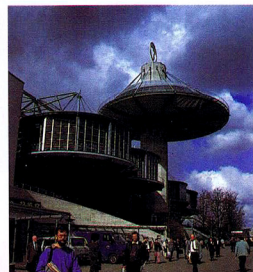
Looking ahead

The majority of the new hardware and software on display in the Atari area was aimed squarely at the Falcon030, although most of the software works on any version of ST as long as the DSP or extra graphics cards are not required. Most of the hardware on display was Falcon or

TT orientated - the TT is still very popular in Germany - and doesn't work with standard STs.

Most impressive was the huge video wall where demonstrations of the Falcon's video, audio and direct to hard drive recording capabilities were shown off.

Bob Gladow, now head of Atari Europe, was enthusiastic about the entire event and said that "everything was going very well" and that he was pleased with the way the Falcon was selling both in the UK and Germany. David Link of



■ This is just one of the huge buildings that make up Deutsche Messe - the large UFO shaped area hanging from the cables is one of the many restaurants at CeBit. The clouds are left over from the morning's snow storm.



GAMES!



Impressions specialise in strategy games to ensure you get good quality.

Renegade (☎ 071 481 9214) are strongly rumoured to be releasing a follow-up to the excellent *Sensible Soccer* – which earned a massive 91% – in the form of *Sensible World Soccer* in which you'll be able to choose from 1,000 teams worldwide.

Small but beautiful

The other less prominent softies are also keeping their ear in with the ST – and rightly so. They too are determined to stick with the quality releases. Take Impressions (☎ 071 351 2133) who are so determined to ensure you get good quality that they've decided to take specialisation to its extreme and

concentrate on strategy games. We review *Cohort 2* this issue (see page 70) and they're also promising *Air Force Commander*. They're also releasing *When Two Worlds War* where you fight in wars between two planets. Impressions expressed great enthusiasm for the Falcon, hinting that they'd be releasing games for it even if the potential user base was relatively small.

The Continental connection

The ST is still very popular in France and Germany, accounting for around 40% of software houses' sales, compared to around 5 to 10% in the UK.

This ensures long term commitment by softies like Thalion (☎ 021 442 2050), who started in Germany, and Silmarils who are based in France. Silmarils, represented by Daze Marketing (on



☎ 071 490 2944) are the first company to release a game for the Falcon – see our review of *Ishar* on page 79; *Transarctica* is shortly to follow – look out for the review next month. *Ishar 2* for the Falcon and ST is coming out in May.

■ After months of speculation and "will we? won't we?" tactics from Gremlin, Zool is coming out for the ST.

Thalion, who have been described in both Germany and the UK as being among the top software houses, released the addictive *Amberstar* about six months ago and are presently working on the next two games of the trilogy, both of which will appear on the ST.



The video wall showing a Falcon generated graphic and sound demo.

HiSoft confirmed that HiSoft were continuing to give their full support to Atari owners by developing new software and hardware for the Falcon and the other Atari machines.

Neil O'Nions of Compo software was also pleased with visitors' reactions to the new Compo packages for the Falcon, *Musicom* and *Falcon Speed*, a 286 PC emulator.

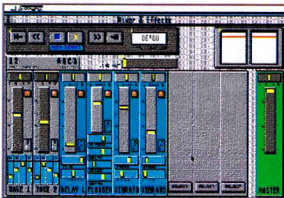
If the enthusiasm of Bob Gleadow, Atari Germany, the Atari developers and the avid crowds of Atariophiles present can be converted into large scale sales of machines, then Atari should have nothing to worry about.



■ Studio Photo from Euro-Soft is optimised to enable special effects and other sophisticated processing effects to be performed on everything from *Degas Elite* low resolution pics right up to 24-bit and Photo-CD quality images. All we need now is a multi-session CD-ROM and a Kodak Photo-CD so we can test it – any offers?

CEBIT, THE GOODIES

The goodies on display for the Falcon at the CeBit show included the *Morphing Fun Machine*, used for creating *Terminator* 2-style animation effects; *AutoDesk Animator*, animation software based on the popular PC program; *InShape* by Roal Christensen, a professional quality modelling, raytracing and rendering package; the *Home Video* kit from Eurosoft consisting of genlock, true colour digitiser and titling software, and *Microsoft Bookshelf Front-end* from Codehead, a specially written application enabling Microsoft Bookshelf PC CD-ROM encyclopaedia software to run on the ST.



■ Trade It have developed a multi-track recording and mixing system so several stereo tracks can be laid down on the hard drive individually. Tracks can be played back while others are recording so multitrack studio masters can be developed. Effects can be performed on recorded tracks or in real time.

...AND PIECES

Graphical graffiti

Titan Designs have developed Graffiti, a video genlock they expect to sell for an incredibly low £116. It has true colour capability designed primarily for the Falcon, although it can be installed in all other Atari machines except the TT using a special adaptor.

Titan Designs are also developing a true colour genlock for the Falcon called *Fresco* – you'll be able to manipulate 3D objects and text in real time, along with texture rendering, 3D tumbling text and objects, mapping onto pre-defined shapes and *Terminator* 2 style morphing.

Complementing *Fresco* is *Exposé*, a true colour video digitiser capable of grabbing 16-bit images from any video source. Images can be displayed at 512 x 512 resolution on the Falcon or be transferred to the *Fresco* genlock.

Fresco and *Exposé* are provisionally priced at around £350 and Titan are considering developing a cartridge port version of *Exposé* if there is enough demand. Contact Titan Designs on ☎ 021 414 1630 for latest availability and prices.

SLAM bang

SLAM from Intrinsic Technology is now on sale for just £25. It is an Akai sampler and sample CD librarian; the latest version is Falcon compatible except for direct reading of Akai format floppy disks. This feature is being dropped because it is faster to use MIDI for the transfer of sample data, the MIDI option also enables auditioning and the addition of comments and does not depend on any specific drive format. You may upgrade to the new version of *SLAM* for £7 if you include an original master disk.

SLAM Pro is almost ready for release and includes *SLAM*, *SLAM Desk Accessory*, an *S9XX* parameter editor and four sample disks. Intrinsic Technology can be contacted on ☎ 081 761 0178.

It gets faster

There are plenty of add-ons and upgrades for the Falcon already in the pipeline, one of the first is a 32MHz accelerator, RAM upgrade board and VME slot in one unit.

The board comes from GE Soft in Germany and was unveiled at the CeBit show in Hannover. The board has eight SIMM slots capable of taking 2MByte, 4MByte or 16MByte SIMMs, so you can add up to 128MBytes of TT RAM to your Falcon030. UK distribution will be handled by Gasteiner Technologies and the board is expected to cost £599 excluding RAM. Contact Gasteiner on ☎ 081 365 1151 – the boards should be available by the end of May.

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Please reserve/deliver **ST FORMAT** magazine each month,
beginning with the July issue, on sale Tuesday 8 June.

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CHAMPIONSHIP CHALLENGE

Domark kick the summer sporting season into touch this month with two exciting new games – *International Rugby Challenge* and *Championship Manager '93*.

Following in the footsteps of *Rugby World Cup* (STF Rating 76%), *International Rugby Challenge* pits your team against 16 other international squads in three tournaments – Triple Crown, Five Nations and World Cup. *Challenge* features improved gameplay, with plenty of gratuitous ear-ripping, enhanced animation and an action replay action so you can gloat over your opponents' pathetic tactics.



■ Cuthbert failed to notice that the team had been superglued to the ball and kicked them all over the goal during his conversion.

This great-looking rugby sim is available now, price £25.99

Championship Manager '93, however, takes a more arms-length approach to the great sport with over 50 new features, including the ability to upgrade your stadium, international caps records for players and Man of the Match awards. If you own an original copy of the game you can get the upgrade for a mere £8.99 (including post and packing) from Inteltek, PO Box 1738, Bournemouth BH4 8YN, otherwise it's going to cost you £25.99

You can find out more about both *Championship Manager* and *International Rugby Challenge* by phoning Domark ☎ 081 780 2222.

Penalty takers

Team	Player	Goals	Misses	Save %
Arsenal	Wendie Renard	12	3	80%
Chelsea	Frank Lampard	10	5	67%
Manchester United	Ryan Giggs	8	7	53%
Liverpool	Steven Gerrard	7	6	54%
Blackburn Rovers	Alan Shearer	6	4	60%
Sheff Wed	Chris Sutton	5	5	50%
Sheff Utd	Chris Sutton	4	6	40%
Sheff Wed	Chris Sutton	3	7	30%
Sheff Utd	Chris Sutton	2	8	20%
Sheff Wed	Chris Sutton	1	9	10%
Sheff Utd	Chris Sutton	0	10	0%

■ The cutting edge of '90s football – who can we pick to cock up the penalty shootout this time?

HOME ACCOUNTS 2 OFFER

Digita International are offering their excellent accounts program, *Home Accounts 2* at a specially reduced price just for **ST FORMAT** readers. Using the form printed below you can order a copy for £29.99 – that's a massive £25 off the usual price. Digita can only supply *Home Accounts 2* at this price if you use this form.

Please send me ☐ copies of *Home Accounts 2* at £29.99

I enclose a cheque for £_____ made out to Digita International Ltd

or debit my Access or Visa card number _____

which expires on _____

Name _____

Address _____

Postcode _____ Daytime telephone number _____

Post this coupon to Digita International Ltd,
Black Horse House, Exmouth, Devon EX8 1JL

Please tick here if you do not wish to receive direct mail from other companies ☐

More Falcon games soon...



Atari's Darryl Still has announced the imminent release of a batch of games for the Falcon. *Humans*, *Raiden*, *Steel Talons* and *Road Riot 4WD* are all due to hit the streets in the next couple of months.

Humans is a conversion of Atari's hugely successful *Lynx* game, centred around a tribe of prehistoric cave dwellers. You have to guide the little chaps. *Lemmings*-style, around a series of levels, collecting objects – like the wheel and the spear – which are going to enable your tribe to progress.

Meanwhile, *Raiden* is a high tech shoot-'em-up which takes place over a vertically-scrolling backdrop. It's your job to pilot an aircraft over hostile terrain, saturated with enemy aircraft, tanks and cannons. There are plenty of power-ups and the gameplay looks frantic.

Still in the air, you take control of a killer helicopter in *Steel Talons*, a 3D flight sim/arcade game. It's your job to weave through the mountainous vector-mapped terrain, destroying enemy ground forces while dodging incoming missiles from their jet aircraft. The demo version looks a little slow, but with any luck this will be remedied before the final version is released.

Back down to earth with *Road Riot 4WD*, the Falcon version of the coin-op classic. You control a four-wheel drive vehicle with awesome firepower, your only task is to blast your opponents off the road and romp home with the prize. The game features digitized pics of girls in bikinis, scaled-graphics and plenty of action. Again, *Road Riot* seemed a little slow, so we await the finished version with eager anticipation.

Many of these forthcoming game releases – as well as Jeff Minter's *Llamazap* – make use of their new 21-button joystick controller which plugs into the Falcon's analog joystick ports.

The pad features an 8-way directional pad, three fire button and a telephone-style keypad for accessing in-game options. More on this next month.

If you can't wait to get your hands on these Falcon goodies, then console yourself with our review of the Falcon version of *Ishar*, Simaril's RPG classic, on page 79 of this issue.



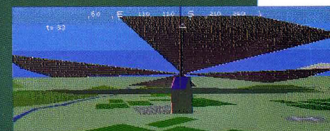
■ The wibbly-wobbly *Humans* build a tower to collect one of their first discoveries, the spear.



■ When the going gets tough, the tough use a smart bomb. *Raiden* is a very frantic arcade game.



■ Win or lose, the prize is the same – gratuitous hugs and posing from the Bikini Grrris in *Road Riot 4WD*.



■ There's plenty of 3D helicopter action in Atari's Falcon flight sim *Steel Talons*.

Dizzy takes a holiday

To prove that there's more to life than the adventures of Dizzy and his cronies, Codemasters (☎ 0926 814132) have released *Firehawk*, an action/strategy game for the ST.

Firehawk has been a smash on console formats in the States with its tale of gung-ho drug-busting in the Larian Islands. You play

the pilot of *Firehawk*, an awesome helicopter gunship which has to pick up US Forces from islands packed with hostile forces. The game promises plenty of finger-stabbing arcade action for only £19.99. Check out the review in the next issue of **ST FORMAT**.

■ Gunboats, jet fighters and tanks all fall under the heavily-armed gaze of *Firehawk*, the latest arcade action game from Codemasters.



More Atari



from HiSoft

News & Views

Language News

Watch out for new versions of our popular languages; Devpac 3, HiSoft BASIC 2 and Lattice C 5. These latest releases include full Falcon030 support with extra libraries, an improved debugger and a comprehensive handbook that discusses using these products on a Falcon computer.

The new libraries include routines for accessing the video and audio sub-systems, Speedo GDOS, MultiTOS, the DSP processor and other new aspects of the Falcon030. As such they are essential for any programmer with a Falcon computer or for anyone who wants to support this fabulous machine.

These Falcon-enhanced versions will be stickered as such on the outside of the box (an example is shown below) and so will be easily recognisable. Upgrade prices start from £10 for each product - please call for details.

The Falcon030-enhanced sticker that will appear on all our software packages that include special features to take advantage of the Falcon computer.



Speedo GDOS and MultiTOS

At long last, both MultiTOS and Speedo GDOS are available in the UK. MultiTOS is Atari's official pre-emptive, multi-tasking operating system allowing you to schedule a variety of tasks on your computer. Speedo GDOS is the new outline font system based on Bitstream's Speedo font engine.

Both programs are released on 22 May, require upwards of 2Mb of memory and are complete with manuals and free 30-day support from HiSoft.

When only the Best will do...

Falcons from HiSoft

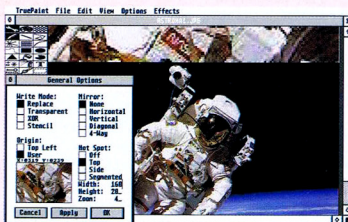
Yes, we have them - now! In what is an unusual step for us, we have decided to stock both the 1Mb and the 4Mb/65Mb HD versions, the retail prices of which are £599 and £999 inclusive.

We have un-rivalled (in the UK at least) knowledge of the Falcon hardware, its operating system and the tools that will be available for this amazing machine; in addition, we firmly believe in quality of customer service, both before and after a sale. So why not give us a call to discuss the benefits of this superb new computer and how it can best meet your requirements?

TruePaint

TruePaint is the first art package to take advantage of the true colour capabilities of the Falcon030 computer ... and it is shipping now. Some of the highlights of the product are:

- Works on all STs and Falcons in all screen resolutions including 768x480 True Colour
- Easy-to-use multi-window environment with menus, toolbox and keyboard shortcuts
- Full range of drawing tools
- A large variety of effects including shear, wrinkle, smooth, rainbow etc.
- Flexible zoom, full screen mode with edit, colour picker, bezier curves ...
- Animation, Font/Speedo GDOS support, wide variety of file formats including IFF, TIFF, GIF, JPEG, Targa, IMG, Neochrome and more
- Extensive and informative 170-page manual



TruePaint was launched at the 7th International Computer Show and has already gained wide acclaim from its users. For more information, please call us and ask for a brochure.

Diamond Edge

From the authors of Diamond Back, the popular hard disk backup program, comes a new package that is essential to any serious user of an Atari 680x0 computer.



Diamond Edge is a complete set of management, optimisation, diagnostic, repair and data recovery tools for use with floppy disks and hard disks. Version 1.04 is now available, this supports the IDE hard disk within the Falcon030 - call for upgrade details.

The current version of Diamond Back, 2.51, has full support for the new 21Mb opticals - again, contact us for information on upgrading.

DataLite 2

We are pleased to have acquired the exclusive rights to this new program from Germany.

DataLite is a sophisticated 'disk doubler' which, by using a combination of compression & de-compression techniques, can save up to 50% of the space on your hard drive or on your floppy disks. We have thoroughly tested this invaluable program and we have found it to be extremely reliable and easy-to-use.

DataLite compresses all types of data on your disk, not just text files, and thus gives you optimal space saving. DataLite is a logical companion for Diamond Edge and Diamond Back II and we have a special, limited offer for a combined pack of all three utilities (see the box below).

Harlekin 3

The latest upgrade to the immensely popular Harlekin suite of desk accessories is released on 22 May. The package has been much improved and extended including non-modal dialogs, a multi-window editor, full Multi-TOS and Falcon030 support and a new manual. Please call or write for full details and upgrade information.

All HiSoft's products should be available through your local computer dealer. If you have difficulty in obtaining a title you can order directly from HiSoft using your credit or debit card - just call 0525 718181 and ask for mail order sales.

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Special Spring 93 Prices from HiSoft

As a very special mail order promotion, we have reduced the prices of some of our software titles for a limited time to readers of this magazine. The following products will be available, subject to stock, at lower prices for the period 22 May until 31 June 1993. You can only order directly from HiSoft using your credit/debit card or by sending us a cheque/postal order (payable to HiSoft), quoting reference AT593M1. All prices include VAT and P&P from HiSoft.

Diamond Edge,
Diamond Back II,
DataLite Package

£99

ProFlight

£14.95

Lattice C 5 - non Falcon

£99.95

Speedo GDOS and
MultiTOS package

£49.95

HiSoft BASIC 2 - non Falcon

£54.95

Devpac 3 - non Falcon

£54.95

Wordflair 2 inc
Speedo GDOS

£59.95

Harlekin 2

£39.95



COVER DISK 47

Get the most out of over 1MByte of data on this month's crammed Cover Disk by reading this...

This month's assortment

Legends of Valour

Exclusive playable demo of the next big thing in role playing games.

Page 12

■ Check out this month's feature starting on page 21 to find out more about adventure games.

Galaxian

The classic arcade blast faithfully transferred to your ST.

Page 15

Stomp

Infuriating puzzle game set against the clock - slide boxes into order.

Page 15

Abominaball

Bouncy ball panic, get those bombs before the countdown ends.

Page 13

Digital Signal Processor

Clean up your samples.

Page 15

ST Zip

The best file archiver around.

Page 16

Picture Monitor

Picture converter that hides in the background.

Page 16

Dynaram

Keep a close eye on how much memory you've got left.

Page 17

Assembler Listing

More groovy source code for this month's tutorial.

Page 17

■ This listing goes hand in hand with our assembly tutorial starting on page 86.

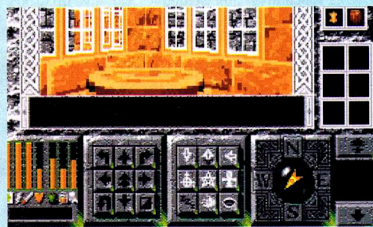
Back Up

Make a back-up of your Cover Disk with this great little program.

Page 17



■ You've hailed one of the locals for a quiet chat. If that's too dull, try beating him up and nicking his gold. You know, it's a rough life this adventuring lark.



■ The wonders of texture mapping in action. Here we are inside a building looking out of the windows. To enter the buildings just head straight into the doors. The full game features shops, taverns, guilds and all sorts of other goodies.



■ The inevitable punch up starts. At the beginning you don't have a weapon, so don't go picking on the heavily armed and armoured guards, a good self-preservation tip there.

Legends of Valour

BY: US GOLD
RESOLUTION:
LOW RESOLUTION
FOLDER: LOV
FILES: LOV1.TOS, LOV2.TOS
GET STARTED WITH:
SEE OPPOSITE

One of the most eagerly awaited new game releases is *Legends of Valour*, with its revolutionary texture mapped graphics. *ST FORMAT* have scooped a playable demo of this blockbuster for you. Like a lot of the big new releases, *Legends of Valour* needs 1MByte of RAM to run. Sorry, but there it is. If you have the required memory, get a blank disk ready. The demo is huge so we've had to archive it. Open

CONTROL YOUR WANDERINGS

The demo enables you to ramble freely about a section of Mitteldorf. Use the movement icons to get about and control things directly with the mouse. Click the right mouse button to take direct control, pressing the left button now moves you forward. Click the right button again to return to normal

1 All sorts of magic items appear in these boxes if and when you're lucky enough to find them.

2 Examine the object in the box below.

3 Nearby objects appear here, click on them if you want to pick them up.

4 Sends you back to the Desktop.

5 Your statistics, from left to right - health, energy, injuries, appeal, hunger, thirst and sleep. Having full bars is preferable.

6 These are your movement icons. You click on these with the left mouse button to move around. The three at the



Before you do anything else, you must read this

Tread carefully

To keep your *STF* Cover Disk safe, write-protect it by moving the black tab so you can see through the hole. Nothing can now be written to your Disk. Write-protection also keeps your Disk safe from viruses.

Study the map

Space on the Cover Disk pages is limited, so you may find text files for some programs on the Disk. These

have the file extension DOC. It's always a good idea to read these for more information on a program. Double-click on them and select "Show" to display the text. If text disappears off the screen when you try to read a DOC file in low res, change to medium res and try again.

Avoid the pitfalls

To keep your *ST FFORMAT* Cover Disk safe you should make a backup, so if

anything goes wrong, you still have the original. Because we use a special disk format to squeeze programs on to the Disk, you can't do a direct disk-to-disk copy. We've made life easy for you, however, with this *Back-up* program. Follow the instructions on page 17 and you can't go wrong. Now there's no need to risk damaging or losing your disk again!

Some programs are compressed to fit on the Disk and cannot be run

directly from it. Follow the instructions here and it'll all be fine.

Is your drive obsolete?

We use a double-sided disk format. If you own a single-sided drive, you can't read the Cover Disks, or much of the new software since single-sided drives are obsolete.

You are strongly advised to buy a new double-sided drive which can cost as little as £35.

Abombinaball

BY : MARTIN BROWNLOW

RESOLUTION : LOW

RESOLUTION

FOLDER : ABOMB

FILES : ABOMB.PRg,

README.DOC

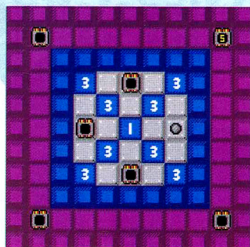
READ : README.DOC

GET STARTED WITH :

ABOMB.PRg

It all looks deceptively easy at first but don't be fooled because *Abombinaball* soon grows into an infuriating game.

The basic task is simple, you use the joystick to control a ball as it bounces around a platform. All you have to do is reach the bombs



Now that's more like it, lots of tricky tiles to increase the challenge. The ones marked with a "3" survive two jumps, the ones marked with a "1" collapse as you land on them. Other tiles need to be jumped over, so choose your route carefully.

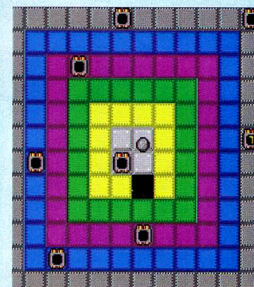
before they run out of time and blow up. You have to do it in the right order too, collect the wrong

one and it's all over. As you bounce around the tiles they disappear, if you jump into the void this also puts an end to one of your precious lives.

On each level you have a number of jumps you can make. Hold down the <Fire> button as you move the joystick to jump over a tile or a gap. If you have any jumps left at the end of the level you receive extra points. There are special tiles to add spice and some ingenious designs to make things challenging.

On every game you have a skip option, if a level gets too much, just press the Spacebar to skip it. You can only do this once per game though, so use it wisely. There are also passwords every five levels, note these down and keep hold of them because when

you enter them at the start you return to that level. Just press the <Fire> button to start on Level One.



One of the easier early levels of *Abombinaball*, it doesn't stay that way for long. There are 50 devious levels to work through.

the LOV folder and copy across the files LOV_1.TOS and LOV_2.TOS to your new disk and run each one in turn. As they unarchive themselves all the files for the demo appear on your new disk. Now run LOV.PRg and away you go.

Legends of Valour is a real-time game that boasts a virtual world where characters live independent lives of their own. Each has a job, house and personality of

his own. You have complete freedom within the game to do whatever you want – basically, you get to live out your own life in a virtual lifestyle. Well, that's what the blurb says. Take a look at it, and see what you think.

The first thing you notice is the amazing graphics. Instead of fixed views, you've got a

3D world and the surfaces have textures, it's absolutely magic. In the demo, you're free to wander around part of the town and explore. You can chat to the locals and beat them around the head if

you wish. Click on the hail person icon when they're in view to call them over to you. Other than that, the gameplay is limited but the demo gives you a delightful taster of what is to come.

top are spin left and right and move forward. The middle row consists of move sideways and run and on the three along the bottom row are turn around and move backwards.

Actions, from left to right starting from the top – slash, thrust and slice – your attacking moves. Map brings up a street map of the part of town you're in. Cast magic spells, cast religious spells, sleep, use item and hail person.

The compass points in the direction you're facing, you can click on them to turn and face a particular way.

Drop the item in your hand.

This is your hand, objects here can be used, thrown or dropped.

Throw the object currently in your hand.

Your backpack, store interesting things you've found or stolen here.

Cash and objects that can be traded.



Set the viewing window. You can click here to change the size of the viewing

window. The smaller the window, the quicker and the smoother the whole game becomes.

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**ANALOGIC
ANALOGIC
ANALOGIC**



Galaxian

BY : SINISTER DEVELOPMENTS
 RESOLUTION : LOW
 RESOLUTION
 FOLDER : GALAXIAN
 FILES : GALAXIAN.PRG,
 READ_ME.DOC
 READ : READ_ME.DOC
 GET STARTED WITH :
 GALAXIAN.PRG

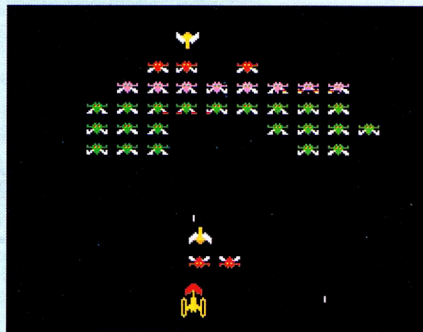
This should bring a warm glow to you if you remember the good old days when summers were longer and hotter, and the *Galaxian* was the latest thing in the arcade game emporiums.

It's a classic left, right and fire-like-crazy blaster. The waves of little alien creeps wibble about at the top of the screen and occasion-

ally swoop down at you – the little devils. Armed with your trusty space ship, your task is simple – shoot the blighters.

Just open the GALAXIAN folder and run GALAXIAN.PRG, press the Spacebar to get past the title screens and select a language. There are loads of options to fiddle with, and you use the function keys to select them. To get going, quickly press <F1>, <Q> and <W> move you left and right and pressing the Spacebar sends a bullet zooming upwards. You can only have one bullet on-screen at once, so timing is extremely important.

You get more points for zapping the aliens as they swoop down towards you, although this is riskier. You can save the high score table by pressing <F5> from the main menu, there's no room on the



■ A slice of arcade history and a joyous blast to boot, *Galaxian* pits your reactions and dexterity against a horde of rabid aliens. It's never dull in space, is it?

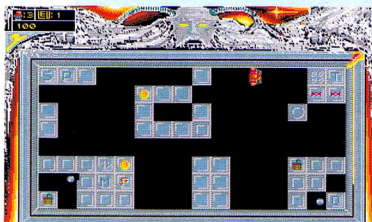
Cover Disk, so always play from a back-up copy.

One or two players can take part and you can redefine the keys or use joysticks. You can even set

the difficulty and number of lives you start with. It's an excellent and faithful conversion of a game that used to eat people's ten pence bits like nobody's business.

Stomp

BY : IAIN MELVIN
 RESOLUTION : LOW
 RESOLUTION
 FOLDER : STOMP
 FILES : MEN.MEL,
 READ_ME.DOC, STOMP.PRG,
 TILES.MEL
 READ : READ_ME.DOC
 GET STARTED WITH :
 STOMP.PRG



■ *Stomp* - 35 levels of hideous puzzlers. If you get horribly stuck you can press the Spacebar to start the level again. This does cost you one life though, there's no such thing as a free lunch.

Simple games often make good games, they also often make the sort of games that have you gritting your teeth and being unnecessarily violent with your joystick. As you've probably guessed, *Stomp* is

one of those games. The idea is very simple, move the blocks around to form the word "stomp," either vertically or horizontally. You control a little chap with your joystick as he tumbles about the screen, stopping when he reaches a block. Hold down the <Fire> but-

ton and he holds onto the block he's on when you move him about.

All simple enough but devilishly difficult. There are bonuses to pick up as well as blocks with dynamite on them. Move onto these, grab the dynamite and move it about before moving off the block.

The dynamite explodes a few seconds after you move off it. Ideal for removing stubborn obstacles. Watch out for the little balls too, one touch and you're a very small footnote in history. Anything else? Oh yes, it's all against the clock.

Just open the STOMP folder and run the STOMP.PRG. Press the <Fire> button to start. The first level isn't very easy at all, and the following ones are a danger to your blood pressure.

If you're likely to get a tiny bit downhearted at 22 attempts at the same level might like to give this game a wide berth but if you relish a challenge and have the sort of mind that can bend to such things, you're likely to love it.

Digital Signal Processor

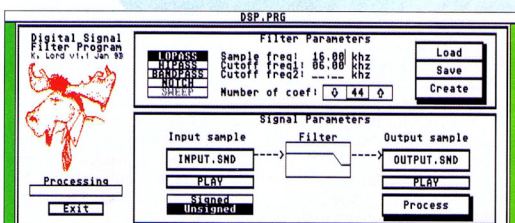
BY : KIETH LORD
 RESOLUTION : MEDIUM
 OR HIGH RESOLUTION
 FOLDER : DSP
 FILES : DSP.DOC, PLAY.DOC,
 DSP.PRG, PLAY.PRG,
 README.DOC
 READ : README.DOC, DSP.
 DOC, PLAY.DOC
 GET STARTED WITH : DSP.PRG

This remarkable program filters digital signals, by removing annoying bass rumble or high pitched whines from your samples. You can customise your filters and save them for future use. If you've some samples that need tidying up, then *DSP* is the one for the job.

Copy across DSP.PRG and PLAY.PRG to a blank disk along

with the samples you want to work on. The first thing you need to do is load your sample. Click on the box below Input Sample and use the file selector to pick a sample. *DSP* uses a separate program to play the samples, so make sure that the program PLAY.PRG is in the same place as DSP.PRG if you want to hear the samples. Enter the sample frequency in the Sample Freq line in the Filter Parameters box. You can now click on Play to hear what your sample sounds like.

You are now ready for the business end of things and the first thing you need is a filter. Choose the filter type from the row of boxes in the Filter Parameter section. A low pass filter takes out high frequency sounds while a high pass filter takes out the bass. A band pass or notch pass does both and needs two cut off frequencies. Type in your cut off frequency and use the up and down arrows to choose a coefficient – the higher, the better the filter but the



■ *Digital Signal Processor* takes samples and runs them through some fearfully complicated mathematical processes of filtering out frequencies. Although primarily for samples, you can use it on any digital data.

longer it takes to produce. Now click on Create and your filter is generated. Your filter appears as a little picture in the Filter box. Click on the box below Output Sample to pick a name for your new sample and click on Process to apply the filter to your sample. Easy. Once you've got filters that you like, don't forget to save them for any future use.

If you wanted to cut out the particularly hissy treble from a

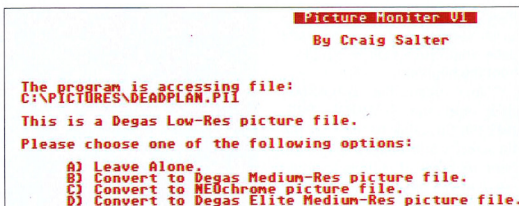
16kHz sample, then click on Lo Pass and enter a value into Cut off freq1, say about 2kHz, and hit Process. If the results sound terrible, then try switching the sign of the sample and try again. All samples are stored as either signed or unsigned, click on the box below the Play button.

It takes some experimentation and patience to get exactly what you want, but the results can be most impressive indeed.

Picture Monitor

BY : CRAIG SALTER
RESOLUTION : ALL
RESOLUTIONS
FOLDER : PIC.MON
FILES : PICMON.DOC,
PICMON.PR
READ : PICMON.DOC
GET STARTED WITH : SEE
BELOW

There are plenty of picture conversion programs about, but none quite like this one. *Picture Monitor* is a TSR program - Terminate and Stay Resident. After you've run the program, it hides itself away letting you get on with using an art package or something and only leaps



■ *Picture Monitor's* menu of options. It cleverly sits in the background and converts pictures for you when you want to load one into an art package. It even displays and prints pictures from the Desktop.

into action when needed to convert a picture for you. No need to exit and run a separate utility to load a picture of a different resolution.

Picture Monitor can convert between all three resolutions of *Degas Elite* pictures, compressed or uncompressed and *Neochrome*.

To install it, copy the program *PICMON.PR* to a new disk and either run the program from the Desktop or put it in an Auto folder on your boot disk, that is the disk in the drive when you first switch on. Now try double-clicking on a picture from the Desktop and select-

ing Show. Instead of the usual garbage appearing on-screen, *Picture Monitor* actually displays the picture for you.

When you're in an art package and you want to load a picture that you normally can't, say a P13 into *Canvas* while running in low resolution. Go to load the picture as if it were a low resolution picture, use the file selector to pick the file you couldn't ordinarily load, the P13. *Picture Monitor* then intercepts the load, and a menu of four options appears, choose the file format you were trying to load, in this case option B and the picture is converted before it reaches *Canvas*, voilà.

No more faffing about converting pictures before you start a session anymore, you can do everything on the fly.

ST Zip 2.1

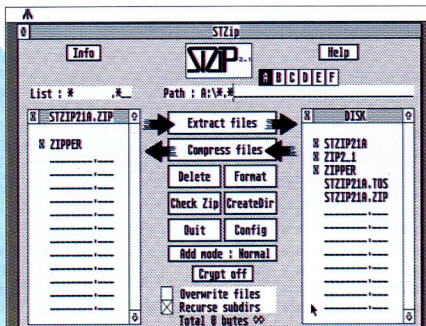
BY : VINCENT POMEY
RESOLUTION : MEDIUM
OR HIGH RESOLUTION
FOLDER : ZIP
FILES : STZIP21.TOS
GET STARTED WITH : SEE
BELOW

The big problem with using modems to upload or download software from a bulletin board, is the time that it takes. The longer you spend connected to the BBS, the higher your phone bill becomes. Because of this, special software has been developed that squashes files down to a fraction of their former size and enables you to compress many files into one archive for storage or transmission.

ST Zip is the latest and greatest archiver available for your ST, almost all BBS services now use Zip files as their standard (including the *ST FORMAT* BBS - 0225 465977) because of the great savings to be made in both on-line time and disk space.

Because *ST Zip* is such a large program, we have compressed it to make room for all of the other Cover Disk goodies. To unpack the program copy the *STZIP21.TOS* file to a blank disk and double-click on it. After a few minutes the program automatically

■ The very easy to use front end of *ST Zip*, with large friendly option buttons guiding you in the right direction. If you get stuck there is a handy Help option at the top of the page.



unpack itself into a folder called *ZIPPER* and is ready to run. Running the *ST Zip* program opens up the GEM file selector and requests the name of the Zip file you wish to process in a window with a selection of options in the centre and a file selector to each side. Enter a suitable name for the archive you wish to create and press <Return>.

The main screen is now displayed, the file window to the left shows files contained in the archive and the window to the right shows the current path. The area in the centre contains a bunch of options enabling you to compress files into archives, extract files from archives, perform disk functions such as formatting and creating folders and configure the program.

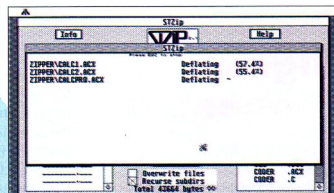
There is even an option to encrypt your files so that they can only be decompressed by someone who knows the password.

The program is dead easy to use. The file window on the right is used to select the path and files that you want to add to an archive or to select a destination path for files extracted from the archive. The window on the left contains a list of the files and folders within the current archive. An individual file can be extracted from a Zip file by clicking on it - any number of files can be selected at once for extraction. Once you have selected your files for either com-

Self-extracting

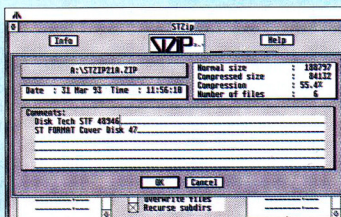
Compressed Zip files can be converted into self-extracting archives by using the supplied *ZIP2TOS* program. All you have to do is run *ZIP2TOS.PR* and select the Zip file to be converted from the file selector. The converted file is about 5K longer than the original Zip so make sure that you have enough space on your disk for both the original and the self-extracting versions. It is not really worth converting smaller files because there is not much point in increasing a 2K file to 7K.

pression or extraction, click on the appropriate option and away you go. That's all there is to it.



■ As files are compressed, details of the file's path and name are displayed along with the level of compression achieved. Recursive sub-directories are saved along with the files inside and are restored in the correct order.

■ Comments can be added to Zip files which are displayed on-screen while the file decompresses. You can enter anything you like as a comment, brief instructions about the program, information about registering Shareware or details of your PD library or BBS.



Other archive programs

The earliest popular packers on the ST were the *ARC* and *LZH* systems, they both developed through several versions gradually getting more and more efficient.

Special Gem based "shell" programs were designed to make these systems easier to use. Both of these packers have now been supplanted

by *ST Zip*, the best compression method yet, based on the *PK Zip* system used on PC compatibles.

There is a later version of *ST Zip*, version 2.2, but there are a few bugs that stop it extracting Zip files from previous versions of the program, not a lot of use for downloading files from BBSs, is it?

Dynaram V1.01 is a small program, that once run from the desktop, or auto folder, dynamically displays the amount of free memory at the top left corner of your screen. The programmers among you should find it useful.

RAM:3853K

Version 1.01 will run from an auto folder on the desktop and supports medium and high resolutions.

I have placed V1.01 in the public domain. It may be copied freely, so long as this text file accompanies it. Future versions will be shareware. Shareware MUST be supported if original software is to be developed for the ST range of computers. Even a simple small program like dynaram takes a great deal of time and effort to program and debug.

Dynaram was programmed and tested on a IMEG ST running TOS 1.00. Any feedback would be appreciated. For example you might like to see the PC, or status or SP etc displayed. Please let me know. You can Email me, Stuart Ball, on the Bull Ring BBS. (021 773 4156)

Dynaram V1.01 is (C) Stuart Ball 11th march 1993.

-End of file-

■ DynaRAM in full technicolour action, well, not quite. So what have we got then? We've got loads of RAM, that's what we've got.

DynaRAM

BY : STUART BALL
RESOLUTION : MEDIUM
OR HIGH RESOLUTION
FOLDER : DYNARAM1
FILES : DYNARAM1.DOC,
DYNARAM1.PR
READ : DYNARAM1.DOC
GET STARTED WITH :
DYNARAM1.PR

Ever wondered how much memory you have installed in your ST? You can run programs that tell you, but what if you want to find

out how much memory you have left when you are in the middle of a word processing bash? You can't run those programs then, can you? DynaRAM, however, is a tiny, but very useful program that gives you a constant read-out of the amount of RAM available in the top right corner of the screen.

Run DYNARAM.PR from the Desktop or pop it into an Auto folder to install it. You now have a constantly updated indication of how much free memory there is, useful when working with large files and uncooperative programs that crash when you hit full.

Assembly Listing

BY : TONY WAGSTAFF
FOLDER : ASSEMBLY
FILES : WINDOW.S
GET STARTED WITH : SEE
BELOW

Love it or loathe it, assembler is a difficult but very powerful programming language. If you love it or are trying to then this month's assembler tutorial should come in handy. It explores the intricacies of GEM and windows. On the Cover Disk is a listing to get you into the swing of things, turn to page 86 for the full tutorial.

Cover Disk Back-up

BY : BRIAN TILLEY
RESOLUTION :
ALL RESOLUTIONS
FOLDER : BACK UP
FILES : BACK UP.TOS
GET STARTED WITH :
BACK UP.TOS

The first thing you should do with your Cover Disk is make a copy. Because of the special format we use to cram lots of programs on each disk, you can't do a standard Desktop copy. You could drag each folder across to drive B, but it takes a zillion disk swaps and is a real chore. The quickest and easiest way is to use the *Back-Up* program which is included on each and every Cover Disk. First write

protect your disk so nothing can be written to or deleted from it. Move the little black tab at the corner so you can see through the hole. Get a spare disk ready and run *BACK-UP.TOS*. From the menu press <1> to start copying the Cover Disk, just swap disks when prompted. The source disk is the one you're making a copy of and the destination disk the one you are copying it to. If you're lucky enough to have two disk drives, then drive A is used for the source disk and drive B for the destination. *Back-Up* is clever enough to use all the available memory, so if you have 1MByte or more, you only need to make one disk swap. *Back-Up* can be used to back-up most other disks too, press <2> from the menu to see if it's possible. It won't copy protected game disks, 'cos that's why they are protected.

What's your problem?

1. This Disk won't load!

Before you do anything else, check your drive. If it's older than 1988, it's probably single-sided and can't format any disks to more than 360K - this also means it can't read *ST FORMAT* Cover Disks. Single-sided drives are obsolete and it's well worth upgrading. Replacement drives are easy to fit and cost as little as £35.

So your drive's spanking new, or at least it's double-sided, and you still have a problem. *ST FORMAT* duplicates thousands of Disks every month so, unfortunately, some are bound to be defective or damaged in some way. If the Disk just won't load, or you can't open a window at all, there's nothing in it, or the folder names are gobbledgegook - the Disk is defective. It doesn't happen often, but please accept our sincere apologies. You're guaranteed a free replacement if you return the Disk to:

ST FORMAT June Disk Returns,
PO Box 21
Daventry
NN11 5BU.

Enclose a sturdy unstamped self-addressed envelope - we pay for the postage - and a brief letter explaining the problem, what hardware it is on and the version of your operating system. If you're worried about sending your precious Cover Disk via the normal service, the Royal Mail's Recorded Delivery service costs only 30p on top of the normal postage.

Please don't send your defective Disk to any other address than the above one - we have no stocks of Disks at the Bath or Somerton offices.

2. I can't work out this Cover Disk program!

Your Disk seems OK; everything loads, but you've got a problem with one of the programs. Make

sure you've read all the relevant Cover Disk pages and any document files on the Disk. Try consulting your ST owner's manual - that may have the information you need. Still got a problem? Then give us a ring on Wednesday afternoon. Telephone the

ST FORMAT Cover Disk Hotline
☎ 0225 442244 on Wednesdays
between 2 - 6 pm only.

We don't write the Cover Disk programs ourselves and don't know as much about them as the programmers, but we'll do our utmost to sort your problem out. Please note that the above phone line is for Cover Disk problems only. If you have any other queries, read on!

3. I have a problem with this other program I bought!

The best place to start is the distributor of the program. Most software houses run some kind of helpline service - check the information that came with your software for the number.

4. I've still got an ST problem!

If you still have a problem, you suspect your machine may be faulty, or you need an answer to a more general query - then you have two options. (a) Ring the official Atari Helpline ☎ 031 332 93233 on any day from Monday to Saturday 6 pm - 11 pm or on Sundays from 8pm to 11pm. (b) Write to ST Answers, *ST FORMAT*, 30 Monmouth Street,

Bath, Avon BA1 2BW - and let *ST FORMAT*'s team of experts tackle your problem in the pages of *STF*. To help us when sorting, could you please indicate on the envelope what type of problem it is - for a full list, turn to ST Answers on page 54.

You could win loads of cash!

We pay for your software - games, utilities, demos - anything good, original and short. If you've written anything worthy of appearing on *STF*'s Cover Disk, send it with this form and full documentation to: Chris Lloyd, *ST FORMAT* Cover Disk Editor, 30 Monmouth Street, Bath, Avon BA1 2BW. Please be patient: we get absolutely loads of submissions, and we try to give them all a fair testing!

Name _____
Address _____
Daytime phone _____
Program title _____
Total size in K _____

On a separate sheet, please explain concisely what your program does and why you happen to think it's so amazingly brilliant.

Remember to: ■ Include on-disk and paper documentation ■ Write your name and address on the disk ■ Use a virus-free disk ■ Contributions are non-returnable, so keep your own copy of your program ■ Enclose an attractive bribe. Not that it makes any difference.

Please sign the following declaration: This program is submitted for publication in *ST FORMAT*. It is wholly my own work and I hereby agree to indemnify Future Publishing against any legal action should copyright problems arise.

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Legends of Valour
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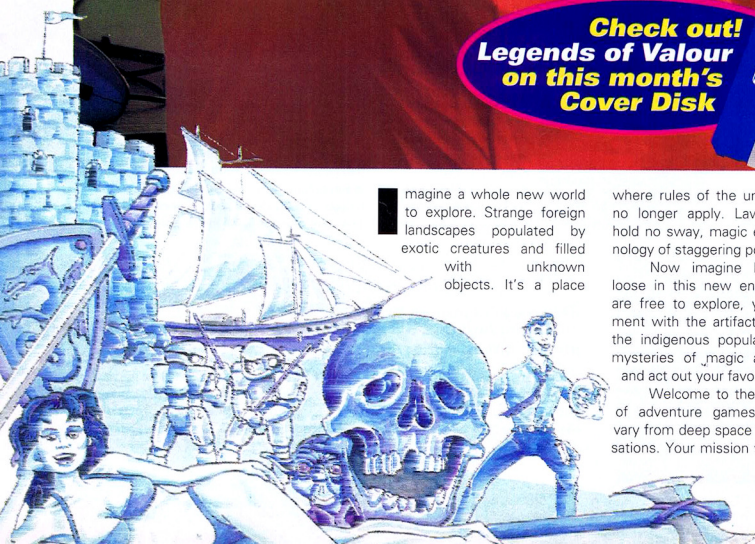
Imagine a whole new world to explore. Strange foreign landscapes populated by exotic creatures and filled with unknown objects. It's a place

where rules of the universe no longer apply. Laws of physics hold no sway, magic exists and technology of staggering power abounds.

Now imagine letting yourself loose in this new environment. You are free to explore, you can experiment with the artifacts, interact with the indigenous population, learn the mysteries of magic and technology and act out your favourite fantasies.

Welcome to the amazing world of adventure games. The settings vary from deep space to ancient civilisations. Your mission varies from just

staying alive to some great quest to save the known world. You are the key player in the never ending battle between the forces of good and evil and your skill and cunning can tip the balance. The flow of events is in your hands, you are the director. Go west to the city or east to the swamp? It's your decision. You can express parts of your character previously limited to your fantasies. Fancy walking into a tavern and starting a punch-up with the meanest looking bunch? Or how about becoming a sneaky, devious and down right mercenary character?



These games appeal directly to your imagination and enable you to escape from the limitations of reality into something entirely different.

Picture yourself in...

Adventure games take many guises and come in a variety of different styles. Early adventures were text based affairs with Infocom games like *Enchanter* and *Lurking Horror* setting

Dungeon Master gob-smacked everyone when it was released and it still sets standards

the scene. Pictures were soon added to illustrate locations. Then came simple role playing games based on popular board games like *Bard's Tale* which provided bags of statistics and character classes. These developed into full-blown mouse operated games with first person perspective. Encounters took on new impact as you battled with animated sprites of your adversaries.

Dungeon Master gob-smacked everyone when it was released and it still sets standards. Graphic adventures follow a similar format to the text based ones but, er, use pictures instead of words to describe the scenes. Your character often appears as a sprite on-screen that you can control with the mouse. These are more linear than role playing games and concentrate on the puzzle solving elements. Prime examples are the Sierra games like *Space Quest* and the brilliant *Secret of Monkey Island* which made all previous games look a little lack-lustre.

The development of fast vector graphics has brought a whole new perspective. You now get a virtual world that is viewed from any angle. Games like *Cybercon III* mix adventure with arcade battles.

In an adventure you can travel all over the known universe and beyond, even through time. The characters you play vary from lean and mean barbarians to smooth and sophisticated detectives. Whatever your tastes, you are bound to find a challenge waiting.

Arcade games are deservedly popular, everybody enjoys a good blast. But it's adventure games that capture the imagination and have you coming back for more. After all wouldn't you rather be somewhere far more exotic doing something far more exciting than what you're doing now?

IS THIS YOUR LIFE?

Sit down and relax. Close your eyes and take a couple of deep breaths. Now, imagine yourself in another place, in another time, in another world.

Who are you? What are you doing? A fearsome dark warrior perhaps, saving princesses from large scaly creatures or retrieving holy items from the clutches of depraved demons with strangely glowing eyes? Or how about a space marine, hanging about in seedy starports interacting with aliens sporting weird ears?

Role playing adventures give you the opportunity to assume another identity and take part in weird and wonderful adventures. Your alter-ego generally has a set of characteristics and skills and is presented with a complete fantasy world to charge about in. Success might bring rewards like money, prestige, increased skills and possibly a snog with the princess. Fail-

ure usually involves some form of death. It's all down to your ingenuity and guile to make the best of things, to survive and prosper.

Role playing games on your ST owe their origins to a series of paper based games like *Dungeons and Dragons* in which you use rule books and funny-shaped die. Each player creates and assumes a character and interacts with a world generated and officiated by a referee. It didn't take long for this to become controlled by your ST acting as ref and handling all the rules, leaving you free to immerse yourself in the central roles.

The worlds in which role playing games are set are diverse - how about outer space or Victorian London? The most popular setting is a fantasy world populated with orcs, dragons and wizards. Tolkien's middle-earth from the *Lord of the Rings* trilogy is the most famous example. You choose a character or party of characters and assign classes or abilities to them

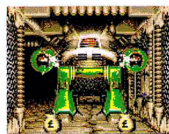
■ *Elvira 2* sees you stumbling about a film studio with very nasty things that try to kill you. This is an involved point-and-click affair.



■ *Legends* brings the isometric angle into play. It involves a bit more manual dexterity skills than most RPGs and a little less brain stretching stuff.



■ *Bloodwych* brought the innovation of two players and the ability to talk to creatures before knocking the stuff out of them.



■ In space nobody can hear you go potty. *Captive* puts you in remote control of four droids and lets you loose in 65,500 locations. A beauty.



■ *Dungeon Master*, the classic role playing game that spawned a dozen clones. First released in 1986, it's still considered as one of the best games of the genre for your ST.



before entering the fray. The *Dungeons and Dragons* game introduced the idea of character classes and character levels which found their way into most fantasy role playing games. You pick a character class -

Role playing games give you the opportunity to assume another identity and take part in weird adventures

fighter, magic-user, thief and the like. Each successful combat brings experience points - earn enough and you go up a level and your abilities increase.

Of course, there are the inevitable taverns, where you pick up gossip about the goings on at the castle, and a few wise wizards

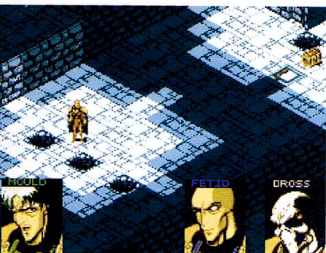


■ *Ishar* has some beautiful graphics and heaps of sampled sound effects too. It remains one of the best RPGs going.

Can anybody think of an original plot

Role playing games certainly have one thing in common, and that's how predictable and tedious the plot is. When will somebody think of an original plot?

"What's my motivation?" cry actors fresh from drama school as they grapple with new parts. All adventures have a plot to lead you into the story and explain why you are in such a ridiculous situation in the first place - half naked, armed with a toothpick and facing an evil



■ **Shadowlands** features a remarkably clever lighting system that means you're always in the dark being hit by horrible monsters at really crucial parts of the game.



■ **Ultima 6**. A huge range of locations and characters that take ages to work through. The interface is easy though.

■ **Shadowlands** uses the same system as **Shadowlands** but is set inside a high tech installation infested with aliens.



■ "Hello tree person." **Knightmare** is a Master clone based on the popular TV program.



scattered about dispensing advice. There's often a wilderness to wander about in and then there are the dungeons, where most of the action takes place. The indigenous life-forms seem to have all taken an instant dislike to you and there are locked doors, hidden keys, puzzles to crack and traps to negotiate.

The next most popular setting is the science-fiction world of slobbering aliens and high-tech weaponry for destroying slobbering aliens. The games otherwise differ little from the fantasy settings with the addition of a spot of planet hopping and trading thrown in.

Invariably there is a quest of some sort to complete, some malicious force to battle, a wrong to right or a rescue to complete. Some enable you to wander about freely interacting with all sorts of sub-plots while for others it's a straightforward progression.



■ **Hard Nova** is loosely based on the **Traveller** RPG and has a fair share of space battles.

■ **The Legend of Faerghail** offers a classic RPG packed with temples, taverns, guilds and damp holes in the ground full of gibbering monsters.



for an adventure game?

horde of ruffians. Some plots are passable while others are, er, well, they aren't. For some reason the imagination of the software producers rarely stretches to the plot.

The worst offenders are the fantasy settings. They all involve a baddie, usually a demon or wizard called Zorgal or Tharg. This guy's been up to no good and he's kidnapped a member of your family, or they've been subjugating the land bringing gloom and despondency. Your mission is to free the captive and/or kill the villain. To do this

There are three basic approaches to presenting the game; the first person perspective, the isometric 3D view and the overhead view. The game that really gave role playing games a boost and led to thousands of sleepless nights was **Dungeon Master** (bundled with **Chaos Strikes Back**, £29.99 from Psygnosis ☎ 051 7095755). It uses the first person perspective in real time to show the twisting passages of a vast dungeon.

At the start of the game you pick a party of four adventurers with different skills and abilities. It's all mouse controlled as you battle your way down through 14 levels before the final punch-up with Lord Chaos.

Similar games soon followed. Games like **Knightmare** (£9.99 from Mindscape ☎ 0444 246333, 77%) copied the idea. **Ishar** (£29.99 from Daze ☎ 071 4902944, 90%) and the soon to be released **Ishar 2** take the standard of graphics and sound up a notch. The isometric approach gives a more detached feeling, a fly on the wall view of things. **Legends**

WHO DO YOU THINK YOU ARE?

The great thing about adventure games is that you can be anyone you like - a swashbuckling hero, a clever detective or a sexy vamp. Here's our roundup of the heroes' heroes, the brightest stars you can get on your ST

GUYBRUSH THREEPWOOD The Secret of Monkey Island



A wimpy pirate wannabe who no-one takes seriously, Guybrush transforms himself into a square-jawed hero with an acid wit who vanquishes his enemies and gets the girl. What a creep.

DORALICE MAY Fascination



This woman plays the vampish detective to the hilt. She does tend to spend more time getting out of her clothes than actually staying in them, but she still has the nous to solve a murder or two.

INDIANA JONES



The archetypal 1930s hero - mild-mannered and cerebral, Dr Jones can also kick ass when he needs to. Christopher Reeve without the snazzy over-the-top underpants and tights.

ELVIRA



Another rather sexy vamp who spends most of her time flashing her enticing thighs and substantial cleavage at all and sundry. She's not really a character you can play, but we couldn't leave her out of this one, could we?

LARRY LAFFER Leisure Suit Larry



Do you remember when Roger Moore used to tramp about in those cheesy safari suits in the '70s Bond movies? That's **Leisure Suit Larry**.

PETER BANNING AKA Peter Pan from Hook



Peter Banning is a fat, humourless yuppie who gradually rediscovers his own lost innocence when his children are abducted by his arch rival, Hook.

HERCULES POIROT Cruise for a Corpse



Underneath that bungling, moustachioed exterior there's a superhero trying to get out. Only someone very clever or very stupid is prepared to take this Belgian detective on.

DIERMOT Lure of the Temptress



A spotty, fair-haired youth who finds himself running around the streets of Turnvale, trying to avoid trolls and attempting to find temptresses.



(£9.99 from Mindscape, 89%) and **Shadowlands** (£29.99 from Domark ☎ 081 7802222, 84%) are two of the best examples.

Games like **Ultima 6** (available from some mail order companies, 70%) give you an overhead view and concentrate on developing a huge game world rather than impressive graphics.

Whichever type of role playing game you choose to express your alter-ego in, you soon find yourself being someone and doing

things you never would in real life, well you could dress up and start kicking in doors and shouting, "By the power of the mystic sword of Thwarg, I banish you to hell!" But you'd probably have a lot of explaining to do to the nice men in the white coats.

Go on, let that hidden side of yourself out. Rescue a damsel or two and use justifiable force on a variety of different life-forms. Or you could always feel really good about yourself and save the world.

you don't get help from an army of fearless warriors, no, just a few dodgy characters you can drag out of the local tavern.

Sounds familiar, doesn't it? **Elvira 2** sees you trying to rescue the outstanding charms of Elvira from Ceberus. **Ishar** has you saving the land from the evil tyranny of a nasty wizard. In **Legend** you must save the land from something that's transforming the good citizens into monsters. And so it goes on. You're hard pressed to find a role playing game with a plot that deviates from this.



CAN YOU SEE WHAT IT IS YET?

The graphic adventure is the ultimate expression of your ST's game-playing capabilities. Brilliant backgrounds, well animated sprites – often accompanied by excellent sound samples – immerse you in a parallel world with an intense, almost cinematic feel.

Many of the games are unrestricted by the kind of linear plots that characterise other adventure games – you can take any route to reach the same conclusion – and there's always plenty of action to keep arcade fans happy.

Lucasfilm was one of the first companies to pioneer graphic adventures on the ST with *Zak McKracken* (£12.99 US Gold/

Kixx XL = 021 625 3366, 71%) and *Indiana Jones: the Graphic Adventure* (£14.99 also from US Gold/Kixx, 77%). *Zak McKracken* tells the story of one man's battle to stop aliens from

■ Your motley crew soaks up the sun as you embark on the biggest adventure of your life in *The Secret of Monkey Island*.

turning the world stupid, while *Indiana Jones* charts the course of Indy's final excursion onto film. Both games revolutionised the way people play adventure games, with their easy to use point-and-click control methods. Unfortunately, both *Zak* and *Indiana* are let down by jerky animation.

After these initial successes, Lucasfilm went on to produce *Loom* (unavailable at present, 81%), the tale of Bobbin Threadbare, the world's last surviving weaver. Graphically, the game is

far superior to its predecessors, but can be completed by a hardened adventurer in a couple of days. Then, in 1991, Lucasfilm played its masterstroke with *The Secret of Monkey Island* (£13.49 from Special Reserve = 0279 600204), a fantastic graphic adventure which was awarded an STF Rating of 96%, the highest percentage ever awarded to an ST game.

Too much monkey business

The Secret of Monkey Island is the synthesis of all of Lucasfilm's previous attempts at graphic adventuring. It features the same whacky sense of humour first seen in *Zak McKracken* and combines it with the graphical excellence of *Loom*.

Set in a mythical part of the Caribbean, *Monkey Island* successfully embroils you in the trials and tribulations of Guybrush Threepwood, the game's slightly nerdy hero. As you explore the island with Guybrush, you get to meet all kinds of weird characters – from bad-tempered storekeepers to socially-responsible cannibals – who can help you defeat Le Chuck, your evil adversary. Each time you meet a character, you're presented with a series of options – humorous and serious – which determine

the responses you get from the person you're talking to. You can often get away with a few choice insults and still end up with some information which can help you on your quest. Another aspect of the game is the ability to use unlikely combinations of objects to achieve a desired objective – for example, putting ink, breath mints, gunpow-

You can take almost any route to reach the same conclusion – and there's always plenty of action

der, a Jolly Roger, the rubber chicken, wine and cereal into your ship's cooking pot casts a navigation spell which takes you to the monkey island of the title.

With such a long shadow cast by Guybrush's adventures, other graphical games on the ST have been hard pushed to keep up. Other US Gold games like *Operation Stealth* and *Another World*

■ Zak McKracken journeys to London in search of the Alien Mindbenders in a pioneering adventure.



■ You know the monkey head can lead you to Le Chuck's lair, but how on earth are you going to get in?



What are you like?

You find them huddled in the gloomy corners of pubs, muttering about Gandalf and sharing pickled onions. Adventure gamers don't have to be like that, do they?

THE STUDENT



Gets out of bed at 4pm, listens to Def Leppard and keeps a secret collection of oddly-shaped dice under his bed. Talks to people only when he's drunk.

THE HIPPY



Hasn't been able to cope with reality since The Beatles split up, so immerses himself in the parallel universe of adventure gaming instead.

THE AMATEUR STATISTICIAN



Writes train serial numbers in exercise books and performs complex equations with him points to impress his one friend. Smells of Ralplex.

RONALD REAGAN

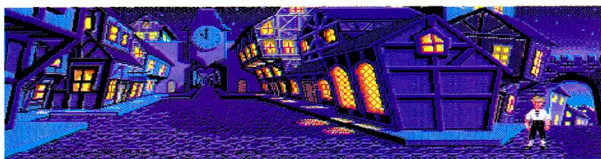


The whole of the '80s was an adventure for Ron, the Cold War was just a sub-game and Nancy was the girl he had to get.

THE ST FORMAT READER



Untouched by the vagaries of fashion, he instantly knows what's best for him and his ST. Hates pickled onions, only goes near a station to catch a train and never wears anoraks. The pick of the bunch.



■ Melee Island – home to an unlikely bunch of heroes, villains and pirhana poodles. Just the place for that holiday in the sun... or so Guybrush Threepwood thinks.

■ Monkey Island's cannibals are a pretty civilized bunch – they go to bed early, wash their cars on Sundays and eat baked brains on toast for tea. Yum! Yum!





■ **Before Indiana Jones takes on the might of the German army, he has to get past a gaggle of eager students at the college where he works, sometimes.**

succeeded where others failed, reaping STB ratings of 93% each. *Operation Stealth* (now on the Kixx XL label, £14.99) is a spy story which puts you on the trail of a missing Stealth bomber, while *Another World* (£25.99 from US Gold) deals with the adventures of Lester Chaykin and his mischievous particle accelerator. *Hook* (£25.99 Ocean ☎ 061 832 6633, 79%) ripped off the *Monkey Island* formula lock, stock and barrel and succeeds only in being derivative and grin-inducing when it should be original and side-splitting. However, *Lure of the Temptress* (£30.99, Virgin ☎ 081 960 2255, 92%) restored faith in the genre with its meander through the mediaeval world of Turnvale.

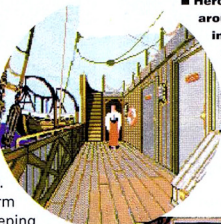
The good, the dead and...

While the majority of graphical adventures erred on the side of good taste, there was always going to be plenty of room for risqué heroes like Sierra's *Leisure Suit Larry*. This sharply dressed man woos women in three ST adventures where scoring counts just as much as completing the game. Each adventure rated highly on graphical presentation, but was let down by leaden gameplay and

frequent disk swaps. Luckily, French firm Coktel Vision are keeping the erotic adventure alive with *Fascination* (£29.99 Digital Integration ☎ 0276 684959, 78%), a game which successfully combines saucy graphics with an enticing plot.

If the adult adventure leaves you cold, how about a spot of rigor mortis? *Cruise for a Corpse* (£27.99 US Gold, 76%) places you on board a ship with a deadly history, and it's your job to find all the clues, interview the ship's inhabitants and solve the murder. This French game features great animation and the kind of stunning graphics which has Amiga owners choking on their chip boards.

With such an illustrious history on your ST, the graphic adventure looks as if it's got a bright future. Plenty of the older titles are now coming out on budget labels while the new games continue to get bigger and better – you never know, US Gold might even decide to release *The Secret of Monkey Island 2* one day...

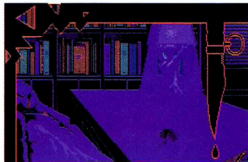


■ **Hercule takes a stroll around the ship of death in US Gold's *Cruise for a Corpse*.**

■ **Hide yourself in the deepest recesses of the ship's bowels in *Cruise for a Corpse* and hide from Poirot.**



■ **Tweak the nipple on the table lamp for an unusual effect in Coktel Vision's saucy *Fascination*.**



■ ***Fascination's* Red and Blue club, home to Pamela Bordes' distant relations and the odd MP.**



■ **Doralice has solved the murder, played the magic piano and discovered the secret passage. So what's she doing in this dingy cell?**

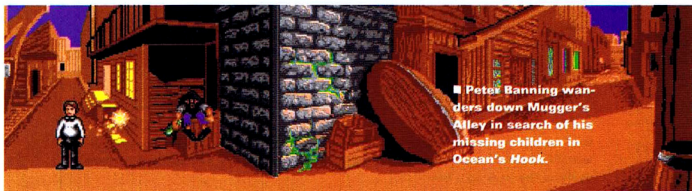


■ ***Lure of the Temptress* - one of the most graphically superb adventures you can get for your ST.**

■ **Beneath Maupiti Island's serene exterior lies a dark secret - oh, and some poor girlie's been kidnapped.**



■ **Larry Laffer, local superstud, returns home to find his wife in the arms of another woman. Strange the tricks fate plays on you, isn't it?**



■ **Peter Banning wanders down Mugger's Alley in search of his missing children in *Ocean's Hook*.**

Fashion victims

You get to wear some pretty weird gear in adventure game land - codpieces, goggles, the lot. So, keep that chequebook handy as our rogueish super models take a stroll down the RPG catwalk

THE MAGICAL HELMET OF THARG

There's usually at least one of these in every single RPG ever made. Stick it on your head for instant invisibility, invincibility or the ability to talk to bedraggled cats. It makes a useful night toilet.

CASHMERE COMFORTER
Designed by Codpieces-Are-Go, the middle earth underwear co-operative. No self-respecting hero would be seen not wearing one of these. Great for storing your lunch in.

THE CROSS-YOUR-HEART CHAINMAIL BRA

Great for lobbing boulders at orcs, the chainmail bra is an essential requisite for any dungeon-bound female. Getting into one really lifts and separates the men from the boys.



THE ARMoured PARKA

Worn by people who sit in pubs, talk about Gandalf and eat pickled onions. Experienced RPGers usually have an "I've been to Rhyll" patch sewed into the sleeve by their mum. Gloves on string are optional extras.



NO PICTURES PLEASE, WE'RE BRITISH

The very first type of adventure game was the text adventure. The world in which your alter-ego cavorts around is described using old-fashioned words.

You type in your course of action on your keyboard, "Get sword and hit orc," that kind of thing. The adventure is divided up into a series of discrete locations populated by objects, puzzles and annoying little pixies or something similar. These text-based programs use a text parser to make sense of your commands, extracting the nouns and verbs and responding appropriately. "The orc reacts faster than you and the last thing you see is a close-up of his nice new axe."

The good thing is that there are no time limits, you can take hours over each move if you really want to. The games rarely use character skills or abilities as such - in effect, you play yourself.

The beauty of the system is the complete freedom, you can type in anything. How free you actually are to make a nuisance of yourself in an alien environment depends on the amount of background programmed into the world. At their worst you can't

You type in your course of action on your keyboard, "Get sword and hit orc," that kind of thing

stray from the plot and you can spend ages trying to figure out exactly how to phrase something so the damned thing understands what you're asking it to do.

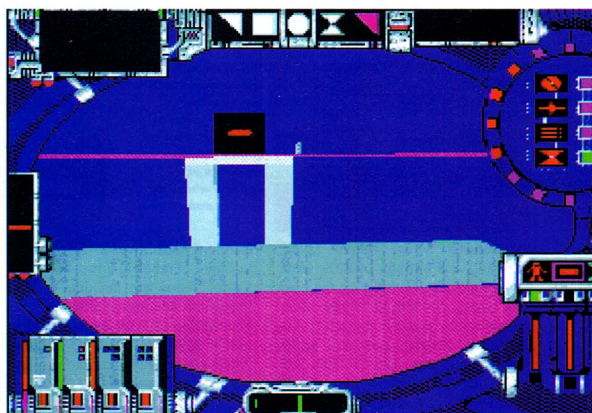
At their best you are free to explore and experiment at will. The lack of pictures means your imagination is free to work overtime. Right from the beginning, with games like *Colossal Cave*, only able to understand simple verb-noun commands the genre developed with the *Magnetic Scrolls* and *Infocom* series, which could figure out a whole sentence.

So, where are these text adventures now? Er, rather out of fashion. This is probably because they don't show off any of the machine's capabilities and, let's face it, they don't look incredibly interesting, do they?

If you like to take your adventures at a more thoughtful pace and prefer to tangle with horrible logic puzzles head-on though, they're well worth checking out.



■ Yes, yes, it's a text adventure and it's got a picture in it. A screen full of text would be just too plain-looking. *Fish*, from *Magnetic Scrolls*, features a wacky plot line, a powerful text parser, fiendish puzzles and the odd picture to liven the text up a bit.



EXPLORE THE THREE DIMENSIONS

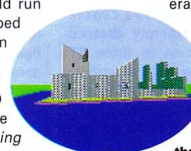
How many times have you played an RPG and wished you could view the action from a different angle?

Well, with 3D adventures, you don't have to wish any more. You're dropped into a fast-moving, virtual universe which offers you unlimited powers of exploration - turn the corner and you could run into a host of vector-mapped baddies or discover a room full of hidden treasures.

There are plenty of excellent examples of 3D adventuring on your ST - one of the earliest was *Let Sleeping Gods Lie* (£9.99, Entertainment International ☎ 0268 54112, 72%) which placed you on the world of Tesseria with a mission to meet God. The 3D graphics meant far more flexibility in the gameplay, marred only by poor animation.

The first *Midwinter* game (£30.64 Microprose ☎ 0666 504326, 96%) really put the 3D adventure

on the map with its tale of survival in the sub-zero temperatures of a nuclear winter. Promoted as "game of the decade" *Midwinter* almost managed to live up to the hype with an astute combination of strategy, adventure and arcade action. Graphically, the game was superb in every respect with fractally-generated landscapes and polygon objects, creat-



■ *Hysula* is one of many 3D adventures to be found in the Public Domain.

ing an extremely real environment for you to explore. The follow-up - *Midwinter 2: The Flames of Freedom* (£34.99, Microprose, 92%) offered more of the same and was touted as a classic on its release.

Other recent 3D adventures like *Cybercon 3* (£25.99 from US

■ With its ambitious graphics and atmospheric gameplay, *Midwinter* is the best 3D adventure game you can get for your ST.

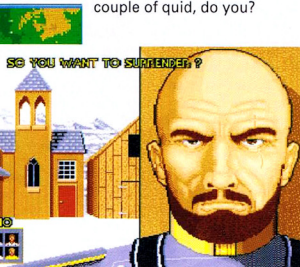


■ Enter the world of virtual reality with the high tech machines of Cybercon 3.

You're dropped into a fast-moving, virtual universe which offers you unlimited powers of exploration

Gold, 91%) and *Mercenary 3* (£29.99 Novagen, 90%) also reveal what the genre is capable of. *Cybercon 3* sends you round a series of 400 rooms, searching for the constituent parts of a key which can help you destroy a beserk defence system, while *Mercenary 3* pits you against PC Bil and his plan to develop Pulvin mines on the island of Dion North. Both games featured smooth-scrolling 3D polygons, with *Cybercon 3* just tipping the balance in terms of playability. Sadly, Novagen are no longer with us and Paul Woakes' *Mercenary* series – including the original *Damocles* game (94%) – have been consigned to the dustbin of history.

The success of games like *Midwinter* and *Cybercon 3* has even filtered down to the Public Domain, with some great 3D adventures lurking in various ST Shareware libraries. Most of the games have been programmed using Domark's *3D Construction Kit*. Recent games like *Hysula* (Disk G246, LAPD = 0773 761944, 75%) and *Dark Carpathan* (Disk C102, New Age PDL = 0702 526435, 74%) both plunge you into a 3D world where exploring rooms in search of missing maidens and keys is the order of the day. Unfortunately, these type of adventures tend to be sparsely populated and gameplay is slow, but then you don't really expect graphical perfection for a couple of quid, do you?



■ With the odds so highly stacked against you, it's time to decide whether to fight or run in Microprose's excellent 3D adventure, *Midwinter*.

PUBLIC ADVENTURES

The Public Domain is stuffed with adventure games. Evil wizards desperate to bring doom and gloom – dark holes in the ground and mysterious deaths abound. The quality varies from ex-commercial games to very ropy indeed. Text adventures are well represented, one of the best being

Blackscar Mountain – it has the vaguely familiar plot of lone hero in a Middle-earth setting battling against the forces of darkness, the puzzles are devious but logical and there are few passable pictures. If you like straightforward text adventures, then it's a cracker. From Little Acorns is a micky-taking adventure



■ *Grandad and the Quest for the Holy Vest* breaks a few moulds and has you playing a grumpy old geezer in an electric wheelchair. The graphics are excellent and the puzzles maddening. A brilliant graphic adventure, check it out.

■ *Darkwars* with a comprehensive set of commands and lots to explore should keep you busy for ages. The graphics are small but there's lots to do and it's all mouse controlled.



■ The classic format and the classic adventure game, *Blackscar Mountain* has you trying to destroy the crystal skull that binds a demon to the material plane. Going home and having a cuppa and conveniently forgetting about it would seem to be the smart move.



■ In *Mystic Well*, delve into dark caverns and stand toe to toe with ravishing monsters, er, sorry ravaging monsters. The graphics are crude but the game has plenty of depth.



■ From

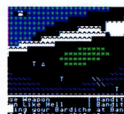
Little Acorns is a refreshing adventure. You start off decidedly worse for wear. The pictures are crude but the game is easy to use.

with its fair share of drunken elves. It's a mix of text and graphics and you use the mouse. Other text adventures to check out are *Shards of Time* and the *Obscure Naturalist*.

Role playing games are less common – they're a damned sight harder to program for starters. From the *Dungeon Master* would come *Mystic Well* and *Darkwars*. Both feature character classes, statistics and the obligatory maze of tunnels to investigate. *Darkwars* has a more comprehensive set of controls, but the graphic window is decidedly small. They're both fairly crude compared to commercial offerings but if long nights in caves drinking strange potions sounds appealing, check them out.

Good graphic adventures are rarer still. Standing tall is the brilliant *Grandad and the Quest for the Holy Vest*. You play a grumpy and forgetful old git. The graphics are admirable and the game is very playable. 3D adventures are represented by a number of games created with 3DCK.

Public Domain authors are by and large a conservative bunch, there aren't that many games set outside the world of orcs and magic or space ships. You won't find the cutting edge of game systems either, but if you're looking for engrossing adventures on the cheap, then get in touch with one of the Public Domain libraries listed on page 95.



■ *DDST* harks back to ancient games from early machines. Your chap wanders around hitting things and collecting gold, not the most involved of adventures. They didn't have graphics in those days, so it's all based on text characters.

SPACE - THE FINAL FRONTIER

BAT 2 is a massive, sprawling adventure which takes in whole solar systems. Only experienced space cadets need apply.

All these earth-bound adventures are very nice, but what if you feel like trying something a little more high tech?

Luckily for you there's a whole sub-genre of games on your ST which deal with nothing but super sleek spaceships and weird-looking aliens - these are space adventures.

A lot of the inspiration for space adventures comes from films like *Star Wars* and *Star Trek* and involve you chugging around a series of planets either as a space trader or as some kind of intergalactic superhero. Games like *Elite* (£25.53 from Microprose, 75%) started it all with tales of intergalactic piracy and intrigue, but recent ST games like *BAT 2* have taken the space adventure to a whole new dimension.

Elite was so successful that, for a long time, space adventurers had to put up with either disappointing space-trade clones like *Space Rogue* (£13.99 Mindscape) or RPGs like *Captive* (£14.99 also from Mindscape, 93%) and *BSS Jayne Seymour* (£7.99 Grem-lin/GBH) or *742 753423*, 70%). These were really nothing more than *Dungeon Master* rip-offs with a futuristic setting.

However, there were some notable exceptions - *Starflight* (£9.99, Electronic Arts) or *549442*, 70%) sent you around a whole universe in search of a lost civilisation, while *Future Wars* (£12.99, Kixx) or *021 625 3366*, 87%) pitted you against a marauding race of space aliens. Another early space game, *Final Command* (£7.99 Digital Integration

0276 684959, 82%) showed the way forward with its atmospheric graphics and intense feel, placing you on an extremely hostile planet in search of a missing teleporter. However, *Murders in Space* (£24.99 Infogrames) or *071 738 8199*, 83%) followed a more traditional path - it was basically an Agatha Christie-style whodunit set on an orbiting satellite station.

By far the best space adventures have been the two *BAT* games. In each you play a member of the Bureau of Astral Troubleshooters (BAT), whose aim is to tackle the kind of intergalactic problems no-one wants to deal with. In *BAT 1* (now deleted by UBI Soft) or *081 343 9055*, you have to save a planet from destruction by a bacterial war-head, while in *BAT 2* (£30.99, UBI Soft) or *081 343 9055*, 91%) you have to stop a greedy conglomerate from holding an entire solar system to ransom. Both games have a strong sense of realism with excellent graphics and sound effects - there are literally hundreds of characters for you to meet as well as bars, adventure arcades and spaceports to explore. Because neither game is limited by a linear plot structure, you can take time out and explore your surroundings.

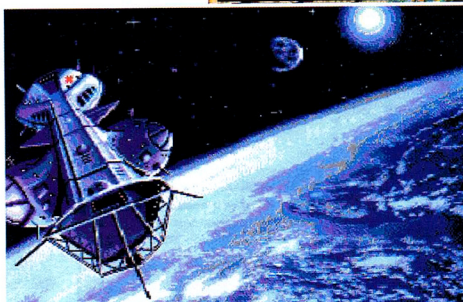
If the thought of all this space adventuring has whetted your appetite, then you aren't going to be able to resist the impending arrival of Konami's *Elite* sequel and *Space Junk*, a mammoth intergalactic jaunt for the Falcon.



Planet-hopping in BAT 2 is made easy thanks to an efficient, but expensive transportation system.



Don't limit yourself to earth-bound adventures - there's a whole universe of off-world games for you to explore.



WHAT ABOUT THE FUTURE?

Where are adventure games going? As the market matures the emphasis has slowly shifted from arcade types to all sorts of adventure games. They offer more than the initial rush experienced from an arcade game and have longer, and ultimately, stronger appeal

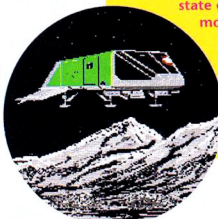
Over the years, adventure games have developed from simple text based games to great sprawling graphic and sonic masterpieces. Vector graphic engines are getting better with each release. The mix of vectors and bit-mapped graphics in *Another World* points to a new direction, while *Ishar* brought stunning pictures that made previous games look crude. Sound effects have risen from bleeps or silence to the wonderful selection of samples that accompany the action. There's no doubt adventures will get bigger and better - who could have predicted the like of *Monkey Island* a few years ago? We've better game systems to look forward to with artificial intelligence, where characters live lives of their own. Each new game builds on the strengths of those before it, *Elite 2* or *Frontier* feature a staggeringly large universe and state of the art vector graphics while *Ishar 2* promises even more eyeball searing graphics and astounding sound.

Another biggie is going to be *Legends of Valour* - check out the demo on this month's Cover Disk - with its revolutionary texture mapped world and artificial intelligence. On the horizon there's *Darkmere*, a 3D isometric adventure. There's no doubt, the future looks bright and decidedly adventurous.



You can't fly anywhere these days without bumping into gangs of marauding aliens who want to use your stomach as an incubator.

One of the worst space adventures ever - Space Rogue's intro screen is about as good as it gets.



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- Diagnostics Function**
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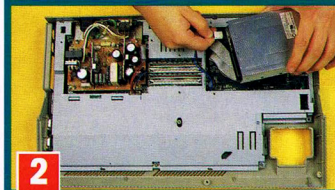
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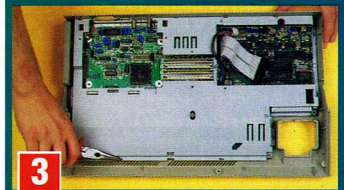
How do I actually take my ST to bits?



1 Unplug all leads from your machine and turn it over. Remove all the screws from the underside, including the disk drive screws. Carefully turn your machine the right way up and remove the lid. Unplug and remove the keyboard and put it carefully to one side.



2 Remove the screws on both the power supply (PSU) and disk drive shielding (STE only) and remove. Unplug and remove the disk drive. Undo the two screws on the front legs of the PSU and unplug the lead to the circuit board, slide the PSU forward and remove.



3 Untwist the tabs on the main shielding, unscrew and remove any retaining screws - you can now remove the shielding. You have successfully stripped your ST, and you are now ready to install your upgrade board in your ST.

TRANSFORM YOUR TOS

Are you worried about upgrading your operating system to TOS 2.06 and losing out on compatibility? Well, fear not. Clive Parker has a nifty solution

The latest version of the operating system (TOS) doesn't just improve your ST's performance, it also makes your display look a lot better.

Just imagine clicking on a video grabber program icon that looks like a camcorder, and when you save your video files, they're represented on-screen by tiny VHS video tape icons. Wild, isn't it?

Icons can be individually edited and be assigned either to a type of file or to an individual file. The resource file that contains all this information can be modified in an editor like Hisoft's *WERCS*.

So, if you still don't want to upgrade your TOS 'cos you're wor-

ried about losing out on compatibility with all your software, there is a simple solution to this problem - use a switchable TOS upgrade.

Apart from enhancing your machine, TOS 2.06 makes it a lot easier to use your Desktop

This ensures that you have full access to your entire library of old software while also having all the

features of TOS 2.06 available at the flick of a switch or the click of a mouse button.

Still not convinced?

TOS 2.06 improves all aspects of your machine's performance. GEM is improved, disk and file handling routines are optimised for better performance, high density drives can be added to the system and larger hard disk partitions can be recognised and used.

Apart from enhancing your machine, TOS 2.06 makes it a lot easier to use your Desktop. Your most frequently used programs can be dragged from the drive window and positioned on your Desk-

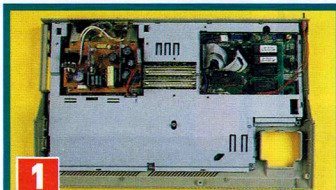
top. If you save your Desktop, then the icon always appears, and double-clicking on the program icon loads and runs the program.

● On the next two pages we give you more details on TOS 2.06, review three upgrade kits and give you a hand with installing them.

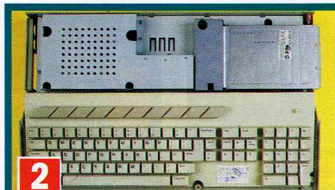
ST FORMAT WARNING

Installing any of these upgrade boards means opening up your machine, which invalidates your guarantee if your machine is less than a year old. If you're slightly unsure of your ability to install an upgrade, then get it installed by an expert. All TOS upgrade suppliers are happy to install them for a small fee.

That's all very nice, but how do I put my ST back together again?



1 Once you have installed your upgrade, it's time to put your ST back together. Replace the main shielding on your ST, making sure that it doesn't touch the upgrade. If you are worried that they might touch each other, then cover the shield with insulating tape.



2 Replace the floppy drive and power supply into the case and re-connect them to the circuit board. Fix down the power supply and replace the shielding over it. If you have an STE, you also need to replace the shielding over the disk drive.



3 Plug the keyboard back in and re-seat it in the case. Replace the lid of your machine and carefully turn it over. Replace the disk drive screws first - this may be a bit tricky at first. Finally, replace the fixing screws that hold your machine together.

The tools you need

If you want to do a good job, you're going to need a little more than pure enthusiasm, how about...

1. Cross point screwdriver
2. Small flat blade screwdriver
3. Small pair of pliers
4. Small side-cutters (snips)
5. A hand drill and 6mm bit (if you're installing the STE switcher)
6. Soldering iron and solder
7. Anti-static earth strap
8. Steady hands

ST FORMAT WARNING

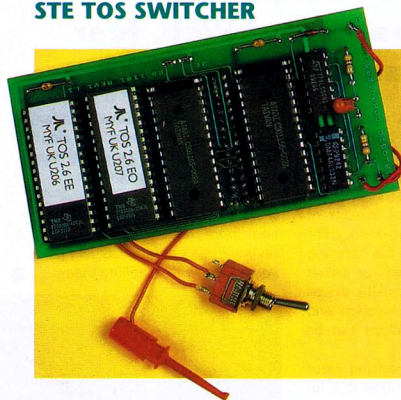
All silicon chips are static-sensitive devices. So, this includes your TOS ROMs whether old or new! If your body is retaining a static charge and you so much as touch a chip, there's a very strong possibility of destroying your body. To avoid this, use an earth strap whenever possible or ground yourself every so often by touching a radiator, a water pipe or a metal table leg.

20 REASONS WHY YOU SHOULD UPGRADE

Upgrading your operating system to TOS 2.06 is a good idea because...

- 1 Disk accessing is faster and more efficient.
- 2 All file copying operations are a hell of a lot faster.
- 3 Individual icons can be assigned to programs and text files making them immediately recognisable.
- 4 Program icons can be dragged onto the Desktop and be launched by double-clicking on them.
- 5 You can assign and run programs from function keys - up to a maximum of 20.
- 6 Colours can be defined, as well as patterns for backgrounds and scroll bars.
- 7 Files can be dragged over a program and released - the program then runs and loads the file automatically.
- 8 The maximum number of GEM windows open has been increased to seven.
- 9 There's a built-in search facility to find files on hard drives.
- 10 You can define file masks so that only the files you want are shown in a window - if the mask is *.PI7, only Degas uncompressed files are shown.
- 11 Icons fit into windows so you only need to scroll the window up and down to find a file.
- 12 Text files can be printed by dragging them to the printer icon.
- 13 Almost all Desktop functions can be assigned to specific keys.
- 14 Pressing <Alternate> and a drive letter opens that drive's window - for example, <Alternate> <D> opens drive D's window.
- 15 Pressing <Alternate> <1> switches from medium to low resolution, pressing <Alternate> <2> switches from low to medium resolution.
- 16 Pressing <Control> when booting a disk bypasses Auto folder programs and Desk Accessories.
- 17 Combining <Alternate> and the ASCII keyboard of special accented and Greek characters enables you to use them in file and folder names.
- 18 You can create and edit icons by using a resource file editor like WERCS.
- 19 The Desktop pattern can be changed to one defined by yourself.
- 20 The Xcontrol panel is designed exclusively to be used with TOS 2.06.

STE TOS SWITCHER



It's not big, but it is remarkably clever. Analogic's STE switcher is so simple to install that pretty much anybody can do it. Soldering is definitely not required, so that's a relief if you're not one of those technical types.

This has got to be the easiest upgrade of them all. No soldering is required, and the whole operation is very fast. It's a pity that it only fits the STE.

To install this STE-only switcher, you remove the old ROMs from your machine and stick them in the sockets on the board. You then plug the board into the old sockets. Analogic's STE TOS switcher only requires a single wire to be connected to the circuit board and, would you believe it, even this part doesn't need to be soldered. Instead it has a spring clip that hooks on in the appropriate place.

The only problem is finding the best place to position the switch, we found that the rear of

the STE on the right is about the best place to put it.

Once installed you can only change between versions of TOS by using the switch while your ST is turned off - if you use the switch while your ST is on, you run the risk of damaging your ST. To avoid this problem, most other upgrades are switched through software.

This upgrade is simple to install and should take you about an hour, there is really no need to get it installed by an engineer.

STF RATING: 87%

- £29.95 without ROMs, £59.95 inc ROMs
- STEs only
- Information: Analogic Computing ☎ 081 546 9575

Follow this hassle-free method to install Analogic's STE TOS Switcher



1 After taking your STE apart, remove the old TOS ROMs from their sockets. Using a small flat blade screwdriver, carefully lever the ROMs out of their sockets by sliding the blade under them. Make sure you note which ROM came from the LO socket and which from the HI socket - these are clearly marked on the main board.



2 With the empty sockets facing the front of your ST, place the board over the empty ROM sockets and press it firmly into place. Place the old ROMs into the sockets on the board and ensure they're the correct way round with the notches to the right. With 28-pin ROMs you must leave a gap at the right end of the 32-pin socket.

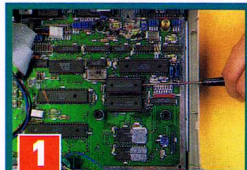


3 The lead with the spring clip is quite long and it can stretch across your ST to a point at the front left of the circuit board. Look for a capacitor marked C100 and, when you find it, connect the clip to the end marked with the "M" symbol. Make sure that the lead doesn't catch on anything when you re-assemble your ST.



4 Drill a 6mm hole for the switch at a suitable point in the case of the STE - we found that the best place was at the back right of the case just behind the floppy drive. You may have to replace the shielding before you fix the switch in place to avoid trapping the wires. Once everything is in place re-assemble your machine.

This is how you go about installing Compo's T-Board 68 STE



1 Because of the soldering you have to do, you need to remove the old TOS ROMs from their sockets. Using a small flat blade screwdriver, carefully lever the ROMs out of their sockets. Make sure you note which ROM came from the LO socket and which came from the HI socket, these are clearly marked on the main board.



2 Locate the Motorola 68000 processor on the main circuit board of your ST. It is a large square chip at the front of the machine near the hole for the mouse port - it is clearly marked. The processor is held down by two metal clips, remove them and line up the T-Board over the chip. Press the board firmly into place over the 68000.



3 Locate pin 22 of the LO ROM socket, it is the sixth pin from the left facing the front of the machine. The blue wire from the T-Board 68 must be soldered into this hole. Be very careful when soldering, do not keep the soldering iron in contact with the socket for too long because you can cause damage if the socket overheats.



4 The sixth pin from the front left of each of the ROMs has to be bent up so it can be soldered to the yellow wires (on a 32-pin ROM it's pin 22, on a 28-pin ROM it's pin 20). Once the pin is bent up, replace the chips in their sockets and solder the yellow wire to each of the legs, taking extreme care. You can now re-assemble your ST.

T-BBOARD 68 STE UPGRADE

Compared to Analogic's STE TOS switcher, Compo have taken a completely different route to installing their TOS upgrade board.

Instead of plugging into the ROM sockets, the board clips onto the square 68000 processor chip with a wire running to one pin of each of the old TOS chips and one wire connected to the socket. Yes, you guessed, you need your soldering iron for this one. The solder-

ing operation is very delicate and you should not attempt this if you are not absolutely sure of what you're doing.

You don't have to drill a hole in the case for the T-Board because the switching between the different versions of ROM is done through the software. A Desk Accessory is provided that enables you to select which version of TOS you wish to use when booting up.

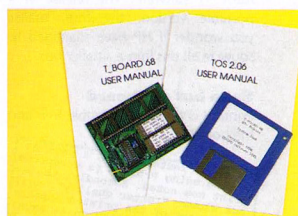
A simple alert box is displayed with options for your old TOS, your new TOS and a cancel button. Alternatively, you can

install an Auto folder program which boots TOS 2.06 automatically whenever you boot-up.

Reasonably easy to install on machines with socketed ROMs, but quite a lot of fiddling about is required on the few STEs with surface mounted chips. This board is well worth considering.

STF RATING: 84%

- £29.99 without ROMs, £69.99 inc ROMs, installation £20.00 plus carriage
- STEs only
- Information: Compo Software ☎ 0480 891819



■ Would you care for some new ROMs sir? TOS 2.06 on a plate ready to be installed into your expectant STE. Just add a few dabs of solder and you're away.

T-BBOARD 64 STFM UPGRADE

Wait a minute, 64 connections to solder? You must be joking!

The STFM version of Compo's T-Board is not the easiest upgrade to install because you have to solder a 64-pin socket onto the 68000 chip.

This is a most hazardous procedure if you're not technically

mindful and intense heat and static electricity can kill your ST stone dead if you make a mistake. If in doubt, it's a good idea to get Compo, your supplier or your local electronics emporium to solder the socket in place for you - a TV repair shop should be able to do the job for you. Once the socket is

installed, then the T-Board simply plugs into the socket and you re-assemble your machine.

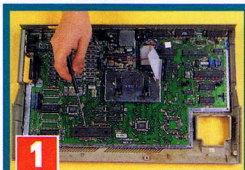
Again, there is no hardware switch for you to install with this T-Board, switching between ROM versions is done by the same software provided with the STE version of the board. Once the socket

is installed, then that's it. This one is not for the faint-hearted.

STF RATING: 78%

- £29.99 without ROMs, £69.99 inc ROMs, installation £20.00 plus carriage
- STFMs and Mega STs only
- Information: Compo Software ☎ 0480 891819

Your easy to follow installation guide for the T-Board 64 STFM



1 After taking your STFM to pieces, you must locate the oblong Motorola 68000 processor - in most machines it is located at the front of the circuit board, towards the left. If the 68000 processor chip is located near the floppy drive however, don't worry, 'cos you can still follow the rest of the installation procedure.



2 Now comes the delicate part. The T-Board 64 is supplied with two 64-pin sockets, one of these has to be soldered onto the 68000 processor. Each leg of the socket must be carefully soldered to the corresponding leg of the 68000 for the board to work. Do not attempt this if you are not 100% sure of what you are doing.



3 Once the socket is soldered in place, check that the board fits into the socket without touching any of the components on the main circuit board. If it does, then plug the second socket on top of the first and then plug the board into it. You might find that you need to cut a slot in the shielding to accommodate the board.



■ This one's slightly tricky. You need to solder in the 68000 socket, if you dare, and convert your trusty STFM into a virtual version of the flagship of the ST range, the Mega STE.

HP PORTABLE DESKJET

**Just when you thought size was
all that mattered, out comes a
brand new portable deskjet**

Hewlett Packard's Deskjet is one of the most popular printers available. It combines excellent output quality with reliability, sturdiness and compatibility with most ST software. The release of a portable version, therefore, makes you wonder if HP have managed to squeeze all this into a smaller box.

Seen but not heard

Printing is absolutely trouble free and the portable

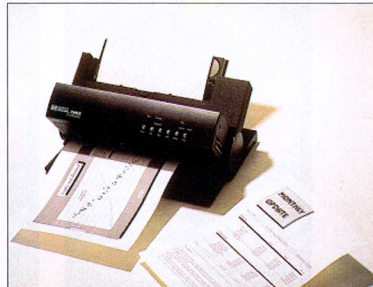
DeskJet is very quiet – in fact, it's one of the quietest inkjets we have ever tested. It's fast too, taking only 40 seconds to print a page of text from the Desktop using *ReadText* – the text file viewer/printer built-in *Mouse Tricks 2* – producing good clear results in the default Courier typeface.

To try the other internal fonts we used *Protext* (£152.75 - Arnor π 0733 68909) because it has a DesJet 500 driver which is compatible with the portable DesJet. It gives more attractive printouts with both the CG Times and Letter Gothic fonts, taking approximately 40 seconds in both draft and letter quality modes. The built-in Univers typeface was not accessible from the *Protext* driver, though, but this is going to be sorted out by Arnor and other software houses when they write a specific driver for the portable.

The portable Deskjet's graphic output quality is excellent both at 150 dpi and 300 dpi resolutions. Using a document in *PageStream*, the 150 dpi page took just under three minutes to print, the first 70 seconds being taken up with *PageStream* creating the bit-image. At 300 dpi, it took just under eight minutes to print, including two and a half minutes to create the bit-image to be created by *PageStream*.

HP supply a cable with the portable. With most other printers,

■ The new HP Portable Deskjet printer can be fitted with a well designed sheet-feeder . It folds out, supporting the printer at an angle of 45 degrees, and enables you to stack about 40 sheets of paper for printing, and the ejected pages are supported on little fold-out arms.



however, you have to buy your own lead. HP's cable is specially thin and lightweight, ideal for carrying around, really. If you have the optional Nicad battery, there is no need for any other attachments. If you don't, just plug in the supplied power supply unit, switch on, and loads of little green LEDs light up. Push a sheet of paper into a slot at the rear of the machine and it automatically reels in – the paper then advances to the correct position ready for printing.

So, is it worth it?

The portable is obviously targeted at the mobile sales and business executives. For them it scores immediately by enabling the instant production of sales figures and price quotations to impress their clients. As you're probably not incredibly mobile when you're sitting in front of your ST though, the standard DeskJet is probably a more sensible choice – unless you're stuck for space that is. If you also bear in mind the fact that the sheet feeder is not part of the package, the standard DeskJet package turns out to be much better value for money. If you are one of the lucky few who own an ST Book, however, the portable is a perfect travelling printer.

PETER CRUSH

How clever!

Not only have they gone and shrunk the good old Deskjet, they've also added a few new features

Take the DIP switches for instance. At a first glance, the portable Deskjet doesn't seem to have any. But look a little closer, read the manual and you find that they exist, but aren't really switches at all.

Putting the printer into the Settings mode and lifting up its cover exposes a pointing arrow on the print-head cartridge. A panel fixed behind the head carries printed keys for each of the many printer settings. You can then move the head with the control buttons to select the particular option you want to change.

With the head in position, other buttons raise or lower the print-head so that the arrow points to the desired setting. This provides an easy, original and rather fun way to set up the printer, and is a lot more convenient than fiddling about with those annoying tiny DIP switches.

HP Portable DeskJet

£528 Hewlett Packard
☎ 0344 369369.

Highs

- Fast and quiet.
- Dead useful if you own an ST Book.

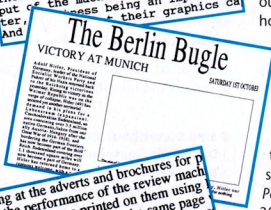
Low

- Extra cost for the sheet feeder means you're much better off buying the standard Deskjet.

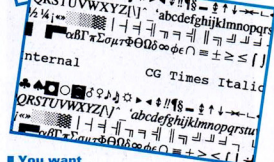
What else?

- Canon BJ-10ex, £199, We Serve, ☎ 0705 647000. 360 dpi resolution.
- Star SJ-48, £199, We Serve, ☎ 0705 647000. 360 dpi resolution.

out these tests. First, a page of
on then using ProText (a wordproc
print was noted. Secondly, the sa
but slower letter quality", he sai
assessment of the printed appeara
lines of text (filling an A4 page), b
luded. Enlarged, the text was not support
styles of printing are not support
inters can machines were assessed
put of the machines being an important
ter, the quality of their graphics ca
And



Looking at the adverts and brochures for proof, check the performance of the review machine. "draft quality" was printed on them using print was noted. Secondly, the same page measuring the speed and enabling an assess lines of text (filling an A4 page) was used but **Bold**, Underlined, *Italic*, Condensed, Enlarged supported by all machines, but most print output of the machines were assessed being important factor if you do lots of printing. Important was printed (a mock-up page).



■ You want standard typewriter-style Courier font, you've got it. If you want proportionally spaced CG Times, or Letter Gothic printouts - you need a suitable printer driver. *Protext* has a driver for the Deskjet 500 which, apart from not being able to use the Univers typeface, proves to be compatible with the portable Deskjet.

Honey, I shrunk the printer

You want technical? We'll give you technical

When you buy a portable Deskjet you get the printer, the manual, a printer lead, an inkjet cartridge and the power supply unit. Here are the technical details:

Size: 310mm (13") wide, 90mm (3.5") high, 240mm (9.5") deep.
Weight: 2kg (4.4lb) printer only,
3.4kg (7.5lb) with sheet feeder.
Graphic resolution: 300 dpi letter
quality, 150 x 300 dpi draft speed:
167 cps at 10 cpi draft, 240 cps letter
quality printing. Printer protocol: HP
PCL Level 3 with extensions. Fonts:

default Courier, CG Times, Letter Gothic & Univers via the software media. Prints on A4, Executive, US Letter & Legal, and transparencies. I/O interface: Centronics parallel port. Buffer size: 48Kbyte receive buffer. Power: supplied with UK PSU and plug, optional Nicad battery.

If you want some extra goodies, HP also supply a good range of optional accessories for the printer. The HP sheet feeder, which copes with 40 pages, costs £81, the clip-in Nicad battery is £39, and if you want to look really smart, the executive-style leather-look carry case will set you back another £81.

GASTEINER



Unit 2
Millmead Business Centre
Millmead Road
London N17 9QU
Tel: 081 365 1151
Fax: 081 885 1953

ATARI COMPUTERS		HARD DRIVES		MICE + TRACKBALL	
520 STE 1/2 Mb	£209.00	GASTEINER ? DRIVE FOR ST, STE, MEGA ST, MEGA STE • High performance drive • Supports up to 7 extra SCSI devices • Autobooting •DMA Throughport • Auto Parking • Accept a second internal drive • Optional battery backed clock • 12 Months back to base warranty • Comprehensive manual • Fast SCSI drive • High quality metal casing • Internal PSU		AlfaData	
520 STE 1 Mb	£219.00			Infra Red Mouse	£45.00
520 STE 2Mb	£265.00			Mega Mouse	£10.95
520 STE 4Mb	£320.00			Mega Mouse (Mat + Holder)	£14.95
1040 STE 1Mb	£250.00			300 Dpi Optical Mouse	£27.95
FALCON COMPUTERS		42Mb (24Ms) Quantum £289.00 50Mb (24Ms) Seagate £289.00 85Mb (14Ms) Quantum £369.00 120Mb (14Ms) Conner £429.00 170Mb (14Ms) Quantum £469.00 240Mb (14Ms) Conner £569.00 330Mb - 1.2 Gigabyte P.O.A Floptical 20Mb Drive £399.00 Floptical 20Mb Disks £24.00 Optional Clock for above £15.00 - SPECIAL OFFER - 52Mb (11Ms) Quantum LPS £299.00		The Trackball	£29.95
FALCON 1Mb	£550.00			Crystal Trackball	£34.95
FALCON 4Mb	£750.00			Optical Pen Mouse	£35.95
FALCON 1Mb 65Mb H/D	£850.00			Automouse/Joystick switch	£2.95
FALCON 4Mb 65Mb H/D	£899.00			Golden Image	
FALCON 4Mb 120Mb H/D	£1099.00	GI-600	£13.95		
FALCON 4Mb 240Mb H/D	£1299.00	Optical Mouse	£23.95		
FALCON HARD DRIVES		Brush Mouse	£19.95		
40Mb	P.O.A	New Golden Image			
65Mb	P.O.A	400 Dpi Mark 2 Mouse	£14.95		
120Mb	P.O.A	SOFTWARE			
240Mb	P.O.A	Word Processors			
NEW GASTEINER SPARE SHOP		1st Word + £55.00			
Power Supply (ST,STF, STFM, STE)	£32.95	Calligrapher Pro £79.00			
Atari Internal Drive	£45.00	Calligrapher Gold £109.00			
Keyboard for STFM and STE	£59.00	DTP Software			
STE Mother Board No RAM	£149.00	Pagestream V2.2 £149.00			
DMA Chip	P.O.A	Timeworks Publishing 2 £80.00			
TOS 2.06 STE/STFM	£59.00	Calamus V1.9 £129.00			
1/2Mb STFM Mother Board	£149.00	Calamus SL £339.00			
Outer Casing STE	£39.00	OCR Software £165.00			
Atari Original Mouse	£8.00	Touch Up £49.00			
MONITORS		Easy Draw £34.00			
Gasteiner High Res. mono monitor		Cyber Studio £25.00			
14" screen with sound	£149.00	Cyber Control £25.00			
SVGA Monitor for Falcon	£239.00	Cyber Paint £25.00			
Atari SC 1435	£199.00	Human Design Disk £10.00			
Multi Sync Monitor	£399.00	Future Design Disk £10.00			
PRINTERS		3D Font 1 £10.00			
Citizen Swift 9 Colour	£179.00	CAD 3D £10.00			
Citizen Swift 240 Colour	£279.00	CAD 3D Developers Disk £10.00			
Citizen Swift 200 Colour	£219.00	Neo Desk 3 £28.00			
HP 500	P.O.A.	Thats FunFace £8.00			
HP 500 Colour	P.O.A.	Signs + Banners £15.00			
HP 550 Colour	P.O.A.	Calendar + Stationery £15.00			
RAM		Greeting Cards £15.00			
Marpet XRAM Deluxe Simms Upgrade For ST, STF, STFM and MEGA ST		Music Software			
0Mb	£30.00	C-Lab Notator £279.00			
1/2Mb	£39.00	C-Lab Creator £179.00			
2Mb	£85.00	Cubest £150.00			
4Mb	£139.00	Cubase £279.00			
Gasteiner STE and MEGA STE Upgrade		Cubase Light £150.00			
1/2Mb	£6.99	Compo Musicom £39.95			
2Mb	£59.00	REPAIR SERVICES			
4Mb	£109.00	New Service Centre - we can repair most Atari Computers. We offer a quotation service for £10.00 for which we will examine your computer and report back with an exact quotation price for the repair. If the repair is carried out the £10.00 is then deducted from your bill.			
8Mb RAM for ST,STE, Mega ST, STE	P.O.A				
Coming Soon					
SCANNERS					
256 GreyScale Scanners with OCR Option.					
Features:-True GreyScales, 100-400 Dpi					
105mm Head + Touch Up + Mergelt	£119.95				
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Full OCR Software	£165.00				
OCR Upgrade for any Golden Image or AlfaData Scanner Only	£69.00				

Products advertised represent a small sample of our instock range. A complete price list is available on request.

Small consumables & software items
Other items, except lasers
Offshore and Highlands
Please enquire

Despatched by post please check charges when ordering
Next day courier service, 10 per box
Please enquire

E & OE. Price subject to change without notice. Goods subject to availability, specifications subject to change without notice. All Trademarks Acknowledged.

ALFADATA HAND SCANNER



It's getting crowded out there, but has Gasteiner's latest hand-held got what it takes to beat off the competition?

Is this the one? Has the ultimate hand scanning package finally been put together? With ever growing and intense competition to contend with, Gasteiner have come up with a pretty good package to tempt you. It comes with the excellent *Touch-Up* and *Merge-It* packages and the AlfaData scanning rule, making the whole thing irresistible.

The hard bits

The actual scanning head is very much like the unit used by virtually every other scanner supplier. It can scan anything up to 105 mm (four inches) wide in one pass. In fact, by using the *Merge-It* software you can scan A4 pages in several passes and paste all the scans together.

The scanner has four different settings, one of which is ideal for



Touch-Up is the most comprehensive combined drawing, editing, scanning, touching-up piece of programming available. This is a dithered 400 dpi monochrome representation of our Editor.

both text or monochrome line drawings, and three modes for photos or coloured artwork which all produce dithered results and give a greyscale impression. Scans can be at a resolution of either 100, 200, 300 or 400 dots per inch (dpi) – the larger the number of dots per inch, the better the graphic detail you can get. Watch out though, the 400 dpi images take up a lot of disk space, so scanning at 200 dpi is the ideal compromise. A brightness control is also incorporated into the scanner to help you get the best results out of those dark original photographs.

The soft bits

To assist you in producing good quality scans, the hand scanner comes supplied with the excellent *Touch-Up* software from Migraph. This program is one of the best scanning software packages that you can get for your ST, and although its power and facilities

may seem a little complex at first, you soon get used to the ins and outs of using it.

Touch-Up runs in all three ST resolutions, but can only handle mono images as it works with bit-mapped pictures made up of black and white dots. Although the program is primarily designed to enable the scanning and subsequent editing of artwork, it can also be used without a scanner as a standalone drawing program – it includes all the drawing tools and capabilities you can usually find in the best art packages.

The end bit

There is no doubt that the AlfaData hand scanning package is a strong contender for the best all-round hand scanner. It offers excel-

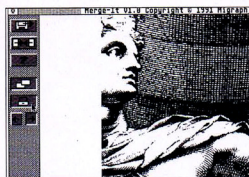
To prove we weren't cheating, this is the resulting merged picture of Apollo, saved as a new IMG file from Merge-It. If you look carefully you can see the join, our deliberate mistake of course, easily fixed by straighter re-scanning or editing.



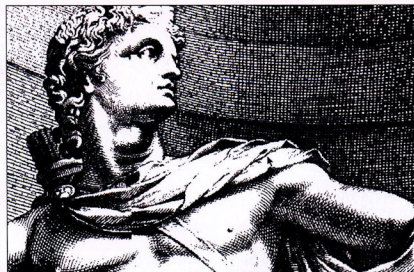
The competition had better look out, the AlfaData Scanner from Gasteiner Technologies is a wickedly good combination of capable hardware and excellent scanning software, plus the cunning Merge-It thrown in for good measure.

lent hardware, the best in scanning software packages, as well as the considerable added advantage of *Merge-It*. You have to look pretty hard to find better value.

PETER CRUSH



Using the cursor keys, you can slide either image about until they meet and merge. By clicking on the little lock icon, you can lock the two images together and scroll up and down to check if the pictures merge nicely all the way down, just as they do here.



Putting all the pieces together

The AlfaData hand scanner is supplied with a copy of a very useful program called Merge-It, this is how it works

Hand scanners are ideal for grabbing small pictures, logos and cartoons and placing them into your documents. There are times, however, when you may want to scan a whole A4 page. Unless you bought yourself an A4 hand scanner (Daatascan – £499.95 from City Beat ☎ 0234 327422) this was impossible.

Now, things are very different. The AlfaData hand scanner produces

A4 scans using the supplied *Merge-It* program and costs £380 less than the A4 Daatascan.

The *Merge-It* program enables you to join two scans together to produce one large image: using *Touch-Up*, the left side of the page is scanned down, and the resulting picture saved as an IMG file. Next, the right side of the page is scanned, making sure there is an overlap of about half an inch. The right scan is then also saved to disk.

Using *Merge-It*, both images are then loaded into a large window where they can be moved about until

the images match up. Their positions can be adjusted very finely by just one pixel at a time until you can't see the join and the resulting A4 picture is saved as a single file.

The left and right pictures can be either opaque or transparent – transparency is the recommended mode when merging your two halves together. In fact, the opaque mode seems to work better to produce an almost imperceptible seam – or at least it did when we tried it. If you need to touch up the finished pic, you can import it into *Touch-Up* for a little judicious editing.

AlfaData hand scanner

£119.95, Gasteiner Technologies ☎ 081 3651151 1MByte minimum.

Highs

- Quality hardware.
- Touch-Up* and *Merge-It* make this scanner excellent value for money.

Lows

- Using *Touch-Up* can get a little complex at times.

What else?

- Naksha Scanner, £116.33, Naksha Ltd, ☎ 0925 56398.
- Power Scanner, £99, Power Computing Ltd, ☎ 0234 843388.



TITLE	PUBLISHER	PRICE
MOTORHEAD	VIRGIN (WHILE STOCKS LAST)	9.99
N. MANSELS WORLD CHAMP	GREMLIN	16.99
NO SECOND PRIZE	KIXX	9.99
OPERATION STEALTH	THLON	11.99
PARASOL STARS	OCEAN	16.99
PIRATES	KIXX	9.99
PITFIGHTER	HIT SQUAD	6.99
PLAN 9	GREMLIN	22.99
POPULOUS/PROMISED LANDS	HIT SQUAD	22.99
POPULOUS 2 1/2 (MEG OR 1 MEG)	ELECTRONIC ARTS	19.99
PREMIER MANAGER	GREMLIN	16.99
PRINCE OF PERSIA	HIT SQUAD	6.99
PUSH OVER	OCEAN	16.99
RAILROAD TYCOON	MICROPROSE	22.99
REACH FOR THE SKIES	VIRGIN	22.99
ROBOCOP	KIXX	7.99
ROBOCOP 3	OCEAN	16.99
RISKY WOODS	ELECTRONIC ARTS	16.99
SABRE TEAM (1 MEG)	KRISALIS	16.99
SCRABBLE	U S GOLD	17.99
SECRET OF MONKEY ISLAND	US GOLD	16.99
SENSIBLE SOCCER	RENEGADE	16.99
SHADOWDANCER	KIXX	7.99
SHADOWDANCER 2 (1 MEG)	KRISALIS	16.99
SHOOT EM UP CONS KIT	PALACE	6.99
SHUTTLE	VIRGIN (WHILE STOCKS LAST)	14.99
SILENT SERVICE 2	MICROPROSE	22.99
SLEEPWALKER	OCEAN	22.99
SLIDERS	PALACE (WHILE STOCKS LAST)	2.99
SPECIAL FORCES	MICROPROSE	22.99
STORMMASTER	SILMARILIS	8.99
STRIKEFIGHTER 2 (1 MEG)	US GOLD	17.99
STRIKE TELET	HIT SQUAD	9.99
SUPERKID 2	MICROIDS (WHILE STOCKS LAST)	9.99
SWAP	PALACE (WHILE STOCKS LAST)	3.99
TEAM YANKEE 2	EMPIRE (WHILE STOCKS LAST)	17.99
TERMINATOR 2	HIT SQUAD	6.99
THE CHAOS ENGINE	RENEGADE	7.99
THE ARBORS	HIT SQUAD	7.99
TRANSARCTICA	SILMARILIS	18.99
TRIVIAL PURSUIT	HIT SQUAD	6.99
ULTIMATE GOLF	GBH	8.99
UNIVERSAL MONSTERS	OCEAN	16.99
VODDOD NIGHTMARE	PALACE (WHILE STOCKS LAST)	2.99
WAR IN THE GULF	EMPIRE	20.99
W/C LEADERBOARD	KIXX	8.99
WWF 2 RAMPAGE	OCEAN	16.99
COMPLICATIONS	GAMMON	16.99
5 INTELLIGENT GAMES	BACKGAMMON/BRIDGE/CHESS/DRAUGHTS/GO	13.99
ADDICTED TO FUN	RAINBOW ISLANDS/ROBBER/NEW LAND/STORY	13.99
AWARD WINNERS	POPULOUS/O 2/P/PIANIA/SPACE ACE	13.99
BITMAP BROS VOL 1	XENON/CADEVAER/SPEEDBALL 2	16.99
DIZZY COLLECTION	PAST FODD/KING SNAILMAGE/LAND/FANTASY WORLD/TREASURE ISLAND	16.99
DIZZY'S EXCELLENT ADVENTURES	SPELLBOUND/PANIC/4 OTHER DIZZY GAMES	16.99
DOUBLE CONFRONTATION	MEGALOMANIA/FIRST SAMURAI	16.99
DREAM TEAM	2D/WWF/SIMPSONS	16.99
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RAVING MAD	ROBOCOP/MEGA TWINS/RODLAND	16.99
SOCCER STARS	KICK OFF 2/GAZZTA ZIMORPORE/SOCCER/EMILYN HUGHES	16.99
STRATEGY MASTERS	POPULOUS/SPRINT/EGAL HUNTER/DOCTORS/EGGSMASHER 2/150	21.50
SUPER STARS	STARS/STARS AND DIZZY/FANTASIA/US/IRONHORN HORN	16.99
SUPER FIGHTER	FINAL FIGHTER/WWF/PITFIGHTER	16.99
THE GREATEST	WOLF/WINTER/NOVEMBER/100% OF THE JAMMER/SHOOTER	21.99

THE SEQUENCE



Pro-12 gives wings to your musical fancy, so here's a little help if you're having trouble getting airborne

Your ST is one of the best sequencing machines available, and so, on the front of *STF 39* we decided to give you a program to prove it.

Pro-12 is a cut down version of Steinberg's *Pro-24* which, for a long time, was considered as the king of all sequencers, making an appearance in most professional studios at one time or another.

All you need to get started is a MIDI compatible instrument capable of making sound, a couple of MIDI leads and you're ready to let out that musical bent.

Most modern keyboards are both polyphonic and multi-timbral. That is, they can play lots of notes at once and can use different sounds for each one of those notes. Once you've got your leads plugged in and *Pro-12* loaded up, you're ready to roll. *Pro-12* automatically loads in a song called DEF.SNG. If you save the song you're working on with this name, *Pro-12* loads it in ready for you.

Like producing anything of worth, some preparation beforehand pays dividends. Unless you're pretty damn hot on the ivories, then just sitting down at the keyboard and bashing away won't produce ideal results. Once that all-important inspiration has

struck you, it's a good idea to plan out the song on paper before you do anything else; chord changes, bars, verse and melody, so you know how it all knits together. Once you've sussed the basic scheme of things, you're ready to start.

The beauty of MIDI is that you can experiment and improvise

The beauty of MIDI is that you can experiment and improvise endlessly without mucking things up

endlessly without mucking things up. So, get plugged in and get down to some serious stuff.

If all this talk about MIDI, music and *Pro-12* sounds very interesting but you don't have a copy of the program, turn to our Back Issues section on page 52 and order issue 39 - this has the program on the front and instructions inside.

MUSIC ISN'T JUST A PITCH

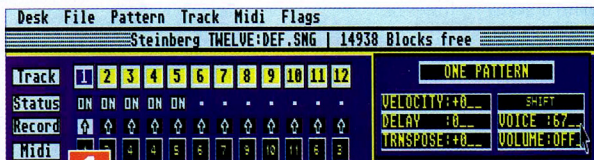
Here's an explanation of all those parameters

At the beginning of each pattern you can set parameters for that particular section, including delay and volume. Click on the Trackinfo box and use the left and right mouse buttons to adjust the values. If your keyboard is velocity sensitive, you can record this information along with the note, but you can also fix the velocity by selecting Fixed. If Shift is selected, the velocity is adjusted by the Velocity parameter. Leaving it on 0 records the pattern exactly as you played it. The Delay parameter plays notes sooner or later,

making it useful for adding special effects or ironing out slight differences between patterns. Transpose changes the pitch of a pattern - a value of 12 is a complete octave. Voice is the sound your instrument plays. Volume is the overall volume of the pattern or track, rather like adjusting the volume on a tape deck, some notes are still louder than others but the overall volume is changed. The MIDI volume is not supported by all MIDI instruments, so check out your instrument's manual. To hear any of these changes immediately hold down the <Control> key and they are sent straight to your instrument as you adjust them.

PIANO, SNARE OR TRIANGLE?

One of the most important parts of creating a song is deciding which sounds to use and whether your main rhythm track should be Latin or not. Decisions, decisions



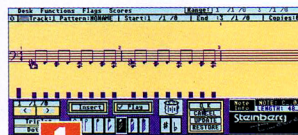
1 Once the germ of a song starts growing, you need to decide on the voices or sounds you want to use and set up *Pro-12* to play them for you.

There are 16 MIDI channels, so click on the little boxes in the row marked MIDI in the top left hand box to change their value. To assign voices to each MIDI channel, you need to create a pattern to use it. Select a track from the row of buttons marked Tracks, and select Create from the Pattern

menu. You can now assign a sound to it. The voice numbers won't necessarily match the voice numbers used on your synth - the instrument's manual has details of your sound bank. Now click on the Trackinfo box in the top right box and hold down the <Control> key then use the mouse to change the values. Play a note on your instrument to check the sound you have selected. You can now run through the full range of sounds available on your instrument.

PATTERN OF EVENTS

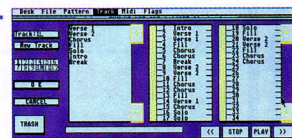
In issue 39 we started a simple song. The basic drum pattern was created using the fill pattern. Starting with this it's easy to expand and build up a complete track



1 You can spice up the basic drum pattern by adding an open hi-hat sound to the 16th beat and deleting one or two of the other hi-hat notes. You can adjust the volume of a note by clicking on it and using the mouse

to adjust the slider below it, give the bass drum at the start of each bar a boost. Add a few other snare hits and change the pitch of a couple, and things start sounding a lot more interesting. Try creating a few variations on the pattern. Copy the pattern to the same track by setting the left and right locators to your pattern's location and setting the destination to the next bar. Now copy the pattern to the track by using the Patt icon and dragging it to right track.

2 Now you have the basic building blocks of a complete drum track. *Pro-12* has two basic modes, you can select them by clicking on the Mode box - tape and sequencer. Select Seq and double-click on the box below the track number. In normal Tape mode each track is replayed exactly as it has been created. In sequencer mode, patterns can be put into any order and looped. You can piece together a song from your basic patterns. Select Arrange



Song from the Track menu. Enter the track number of your drum patterns and select New Track. A list of the patterns appears in the left hand box. Just drag them across to the arrangement window in the desired order. Click on Play at the bottom to hear the track.

OF EVENTS



JARGON BUSTERS

Channel

MIDI messages are divided into channels, most modern instruments have 16. Each channel can specify a sound or voice on an instrument.

Controller

Any device capable of sending MIDI data - this can be a synth or a foot switch.

Event

A piece of MIDI data, a note being played or a control change like a volume change message.

Expander

Basically a MIDI keyboard without the keyboard, full of voices directly controlled via MIDI.

Local

Multi-timbral synths use local control to determine whether or not the instrument is controlled by the synth itself or by an internal or external sequencer.

Monophonic

A synth only capable of playing one note at a time.

Multi-timbral

A device capable of playing different sounds simultaneously.

Patch

Any sound, programmed or preset into your instrument.

Polyphonic

The ability to play more than one note at once, a 16 note polyphonic keyboard can play 16 notes at once.

Quantizing

Adjusting a piece by making sure all the notes are played in exact time.

System exclusive

MIDI data which refers to a particular type and make of MIDI instrument.

System message

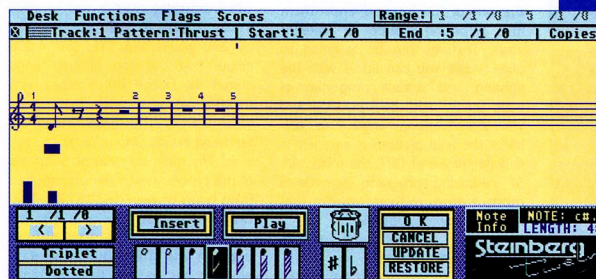
A MIDI message that addresses the instrument as a whole, such as turning all the notes off.

2

The drum sounds are treated differently to the other voices. Select a track and select MIDI channel 10 - this is where you should find your drum sounds.

Create a pattern and go to the Score Edit screen. Deselect Play and select Insert, then put a note in the first bar. Now press the

<Clr Home> key and you can start exploring all those exotic drum sounds. Click on Note at the bottom with the right or left mouse button to move the note up and down. Here's a good chance to pick your drum sounds and make a note of them for future reference if you don't have them in your instrument's manual.



4

Now for the big part, the melody. Unlike with the other parts, the melody isn't suited to the building block method of creation. Select a new track and use the left and right locators to encompass the section of song you want to work on.

Now go to the Flags menu and set Cycle to Auto. Now highlight the Cycle icon. You can now start playing, the Auto mode means everything will be erased

when you restart. You can experiment as many times as you want without having to reset everything.

Using the Mix mode would overdub everything, which is useful for adding sections or building up drums played from the keyboard. Press <*> and you are given a two bar count in before the sequencer starts recording. Press the Spacebar when you're done. Any inconsistencies can be edited at the Score Edit screen. **stf**

3

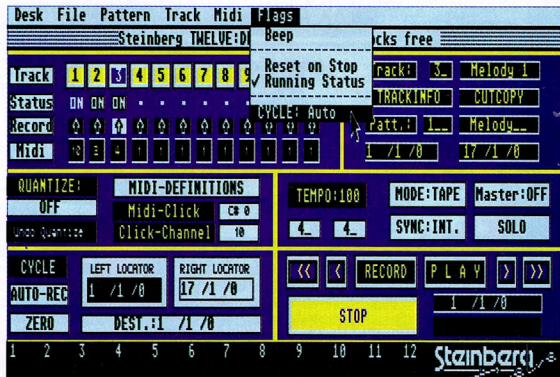
The bass can be pieced together in the same way. The fool-proof way is to use Step Edit to enter the notes one at a time. After creating a suitable pattern, go to the Score Edit screen. Choose the note length and change the clef to the bass clef from the Scores menu.

Now right click on the Insert icon and the box should display Step. Play away at your keyboard, it doesn't matter how fast or slow you are, as the notes appear one at a time on the staff. You can add a rest by using the <0> key and

delete any notes which you're not too happy with by using the <Backspace> key.

You can transpose the piece up and down the scale from within the Trackinfo box. The danger with this way of producing bass lines though, is the lack of a human feel to it. You can add this feel in the same way as for the drums.

Adjust the volume of some notes or play with the timing of others. From the basic pattern, you can build up the bass line for the whole song in the same way as you did for the drums.



XENOMORPH

■ "Remember men, the only thing we have to fear is fear itself - er, and possibly a box of matches."



A supremely powerful rendering package... with a funny Greek name

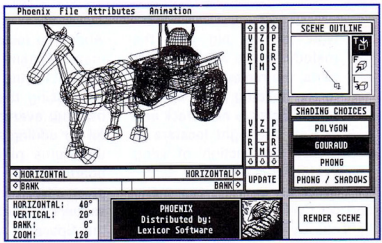


WHO ARE RAY AND TRACE THEN?

So, what is raytracing and how does it actually work?

Raytracing involves some hideously complicated maths but the basic idea is very simple. You define a scene and let your ST work out what it would look like. You choose objects, lights and the observation point. Objects have various parameters applied to them - transparency, reflective value, surface detail. Lights are given a colour and intensity. Next you let loose the maths. Rays of light are traced mathematically from the lights and followed as they bounce around your scene before arriving at the observation point. The final picture is built up pixel by pixel. It's the nearest to reality you can get on a computer - the algorithms are very lifelike giving all the subtleties of shading and light.

■ **Xenomorph's** centre of operations. The main window shows a wire-frame view of your scene from the camera point. On the right you have an overview of the entire 3D world. Everything uses the familiar GEM environment.



Every now and again, a piece of software comes along that blows your socks off and really shows what your ST can do. *Xenomorph* blows yours off, takes them down to the cleaners and delivers them neatly folded outside your door the next morning.

Xenomorph is a raytracing program that can accept 3D objects in the form of 3D2 files and render them in a surprising number of different ways. Textures can be assigned to objects and you can fiddle with the lighting and surface properties of your scene, add backgrounds and view them from any angle. The quality of the final pictures is excellent - *GFA Raytrace* and *QRT*, the other two ST raytracing programs sometimes produce ropey pictures. None of that here - it's always spot on.

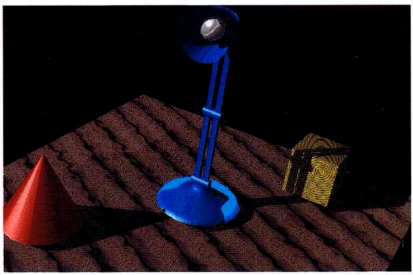
Raytracing for all

Xenomorph can run on the entire Atari range from 1MByte STs and STes

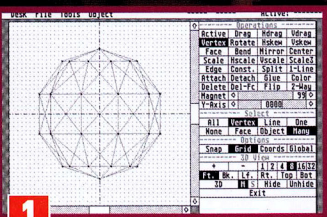
right up to the Falcon. It makes full use of the capabilities of the host machine, including maths co-processors and graphics cards like Crazy Dots. You can render images independent of what resolution you're in - for example, you can create TT low resolution or Falcon VGA pictures on an ST. Obviously the ability to display the finished pictures depends on which machine you've got, normal STs are limited to 512 colours at 320 by 200 pixels and STes get 4,096 colours. At the top of the range comes the Falcon which copes with 32,000 colour images more than twice the size. The final pictures are rendered in GIF, SPC or Targa.

The main bugbear of programs of this type is speed - rendering often takes hours or even days to complete. *Xenomorph* is fast, even on a standard ST. It doesn't exactly draw pictures between sips of tea, but considering what it has to do, the program's commendably speedy. The only time

■ The renowned range of **Cyber** programs can render 3D2 files, but **Xenomorph** takes them to unrivalled quality.

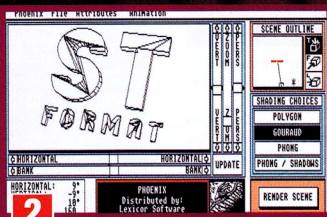


Create the shapes, and then sit back and watch your ST do all the work



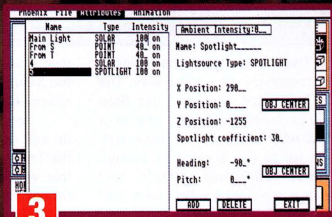
1

The first step is to create your 3D object using *CyberSculpt*. Objects are built from a number of eight primitives which are then spun, extruded and stretched in a variety of ways to resemble the shape you first thought of. Now load it into *Xenomorph*.



2

Any number of objects can be loaded into a scene. First you need to sort out the observation point. There are three different camera types and you can use the sliders on either side of the main window to adjust the camera's position and angle.



3

Remember, you won't see much without any light. You can add solar, point or spotlights as well as define ambient light and position the lights anywhere in your scene. There are convenient short-cuts to make things easy.

■ One of *Xenomorph's* cleverest tricks is its ability to map pictures onto objects. You can take any picture and map it around a shape - you could model a 3D head and then map a face onto it.

it isn't, is when you go for maximum quality rendering with shadows - your ST seems to go on a little holiday.

Quality throughout

The interface is mostly mouse controlled and very easy to pick up, the manual is clear, concise and reasonably thin. Before you can get very far, you need some objects to render. *Xenomorph* comes bundled with *Cyber Sculpt*, a very powerful 3D object editor. Mastery of this program is part of the key to getting impressive final results - the better the objects you put into the mix, the better the final results.

Crude animation is also supported using tweening. You define the first frame and the last frame and *Xenomorph* works out the frames in between. You can move objects, lights and camera positions as well as alter their surface properties. The final

■ At the other end of the quality scale comes this rendering in ST low resolution with only 16 colours - it's still mighty fine and ideal for use in games or animations.

set of frames can be compressed into a delta file so you can look at them.

Textural delights

There are two built-in textures, wood grain and marble, as well as the ability to map pictures onto objects.

More textures wouldn't go amiss - metal and water would have been welcome. There's no provision for anti-aliasing, leading to some very sharply defined edges. The main difficulty you're likely to experience is mastering the 3D modelling - it takes perseverance and patience. Luckily the format is quite common and there are lots of examples in the Public Domain to plunder for inspiration.

Verdict

It's difficult to find any major faults in *Xenomorph* - it sets out to achieve an ambitious task and does it with aplomb. By any standards it's a superb piece of programming and at that price, it's a steal. If you're looking to produce the ultimate in Atari graphics, look no further.

CHRIS LLOYD

■ *Xenomorph* unashamedly showing off what you can do. This picture is a whopping 1,280 x 960 pixels in size and has over 16 million colours. Slight overkill there, but it gives you an idea of what is ultimately possible.

Xenomorph

£79 16/32 SYSTEMS

0634 710788

STs with 1MByte of RAM minimum, TTs and Falcons

Highs

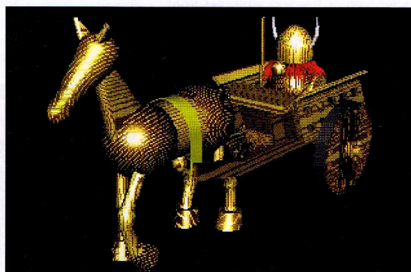
- Astonishing results possible without a degree in maths.
- Full support of the entire Atari range including graphics cards. Pictures in 16 to 16 million colours in any size.

Lows

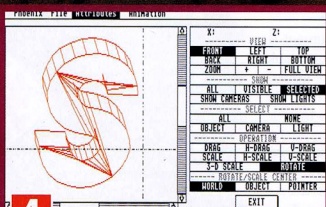
- Only two built-in textures. Full Phong with shadows rendering gets slow.

What else?

- QRT from Cover Disk 33.
- DKB from the PD. These can both render in 24-bit but are slower.

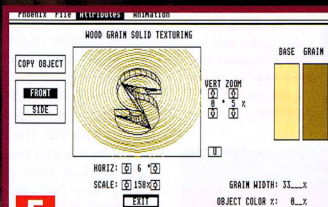


■ A welcome edition to *Xenomorph's* repertoire is the ability to render in Spectrum 512 format, it can even create STE versions with 4,096 colours.



4

Individual objects can be moved and rotated in all three dimensions, enabling you to fine tune the relative positions of the objects in your scene. You can also change the relative sizes of objects in all three dimensions.



5

The surfaces can either have wood grain or a marble texture applied to them. You can also map textures on to them - GIF, SPC or TGA pictures. You can fiddle with a variety of other parameters including transparency, reflective coefficient and colour.



6

This is the final object once it has been rendered. There are four levels of detail and you can render the result in anything from a 16 colour ST low resolution picture through to a full-blown 24-bit Targa picture of almost any size.

EASY TEXT PROFESSIONAL



If you think quality desktop publishing is an expensive business, Frank Charlton has a bit of a revelation for you

If there's one area where the ST has eaten into the market traditionally controlled by the big boys, it's desktop publishing.

With high specification packages such as *Calamus SL* – retailing at a little under £600 – producing your own magazines, posters or flyers is possible from your armchair. If you're on a limited budget, however, try *Easy Text Professional* from zzSoft as a low cost entry option.

Easy Text Pro is a frame-based desktop publishing package which runs under Atari's GDOS system. All objects, text or graphics, are held within boxes called frames. The program comes supplied on three double-sided disks, and a comprehensive installation program sets up the system to suit your specific setup. Getting it onto your machine is easy

enough, but be prepared to swap disks a lot and to wait for about half an hour if you don't have a hard drive.

Ready, steady, go!

Once you run the program and the fonts you specified in the ASSIGN.SYS file have loaded, you're presented with the DTP designer's worst nightmare – a blank page. The ASSIGN.SYS file is a text file which GDOS uses to identify which fonts and drivers you need – the installation program writes this for you automatically.

The program makes full use of GEM's facilities, and most of the menu functions are duplicated in an icon toolbar running down the side of the screen. Let's say you want to produce a simple poster featuring an advertisement, you need to be able to enter some text. Creating a text



■ Text and graphics are dropped into their respective frames and within minutes you too can produce your very own magazine of dubious content.

frame is simple. Click on the Text icon and then the Create Frame icon, then click and drag the box to the size you need. You can enter text into the frame in two ways – either by typing it into the frame, or by importing a file created with your favourite word processor. Typing straight into the frame is not recommended for anything longer than a few words as the screen update is quite slow.

Once your text is in the frame, editing and re-formatting it is very easy. You select the block you want to change by dragging the mouse over it while keeping the mouse button down. Then you change the character type or size and attributes from the menu. Text can be centred, fully justified, or even justified to the left or right. If your text is too large to fit into one frame, it can be linked to another one, and the text flows automatically into it.

Column guides are provided on-screen and can be adjusted from one to eight columns. You can use these just as visual aids, or you can get your frames to snap to them. The margins and the inter-column space can be altered to create the page setup you want. You can define headers and footers, and layouts can be copied across from one page to the next, creating book-style printouts.

What about graphics?

Adding pictures to your document is also dead easy. Create your blank frame, then import the picture from a disk. *Easy Text Pro* can optimize the size of the bitmapped pictures to your screen or printer. This is a very useful option, as scanned photographs often look rosey if their proportions are wrong. *Easy Text* also comes with a set of built-in vector objects such as lines, boxes, circles and stars.

Easy Text Pro comes supplied with drivers for 9 and 24-pin dot matrix printers, the Atari laser, and the newer Canon Bubblejet types, but PostScript output isn't supported.

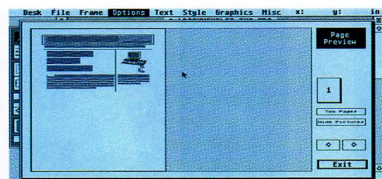
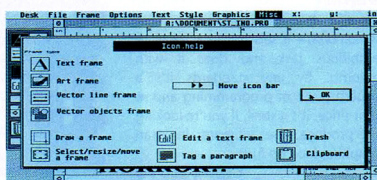
Good printouts can be obtained from even the most basic dot matrix. The quality isn't *Calamus* standard, but then it's considerably faster, and the end result is identical to what you created on-screen.

Verdict

As an entry level DTP package, *Easy Text Pro* can't be faulted. It doesn't beat the big boys, but its ease of use and the quality of its results are certainly greater than you'd expect from a package with a price that is little more than the average game.

If you've always wanted to produce your own quality documents, you must have a look at this before spending large amounts of cash on anything else – it's as simple as that. Highly recommended. **stf**

■ The program's built-in help function provides a quick and easy key to those pesky little icons.



■ The extremely useful Page Preview function gives a thumbnail view of what your page looks like. Text is replaced by grey bars to speed up the screen updates.

Can you handle this?

Easy Text Pro handles text files created with *First Word* and *First Word Plus*, *GST Word Writer*, *Protext*, *ST Word*, *K-Word* and *Redacteur 3*. All formats such as bold and italics are retained in the frame, but don't worry if your word processor isn't supported – you can import text files in ASCII format and add the formatting later. As far as pictures are concerned, *Easy Text Professional* supports bitmap and vector graphics.

Easy Text Pro 1.09

£39.95 (£25 upgrade from *Easy Text Plus*)
zzSoft ☎ 0254 672965
1MByte minimum, medium or high resolution.

Highs

- Costs only slightly more than a game.
- Dead easy to use.
- High quality output.

Lows

- Working off a floppy drive is tedious as you need to do loads of disk swapping.
- The screen update is relatively slow.

What else?

- *Calamus 1.09n*, £140, Halco Distribution, ☎ 0734 441525. Hugely powerful.
- *Pagestream 2*, £169, Silica Systems, ☎ 081 3091111. Ideal introduction to desktop publishing. PostScript output.



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BREAKTHRU



If you've been dreaming of smooth sample handling and top quality MIDI sequencing, Andy Curtis has just the thing

Gajits have done it again! As with *Sequencer One* and *Sequencer One Plus*, the Manchester-based MIDI experts have once again produced a top quality sequencing package that won't cost you the earth. *Breakthru* and *Breakthru Plus* combine an easy to use note-editing system with plenty of features to keep you interested for ages while producing some pretty remarkable results.

The only difference between the two versions is that the *Plus* version includes extra hardware and software to enable you to use up to 32 MIDI channels. The hardware car-

riage position as well as see it. This really helps and completely removes the guesswork out of note positioning. The final diamond is actually a square and it governs functions such as copying or deleting. This entire editing system is instantly appealing and very easy to use.

On the main track list screen there are actually 64 tracks available, more than enough for even the most complex piece. Provision is made for track names of up to 16 characters and you can also assign a 28 character title for each piece of music as well as the standard GEM 8 character name. On the main screen there are controls for MIDI Channel, MIDI Volume, Pan, GM MIDI bank and program change – sadly there is no control for MIDI velocity offset.

Building a song

Breakthru songs are not made up of smaller blocks. Instead, you're expected to make up sections using looping between marker points

and the cut and paste options to build up each song. To aid this process, there is a sophisticated cue list system available – this enables you to jump nimbly from section to section and also serves as a plan of how your song is building up.

One big let down of the program is that you are not able to change track variables while the music is playing – the mouse is disabled. This means that if you wish to change a track's volume, you have to

■ The Diamond Drag note-editing system at work. Using these four diamonds and a square, you can change almost any parameter you want.

stop the sequencer, edit the volume and then re-start. There is also no facility for background auto-saving.

The score edit section is clearly laid out and editing of the key signature and part appearance is easily done. As with most of the edit sections, notes can be step entered and edited using the Diamond Drag system. An Accessory is also being developed to enable you to print your scores. Please contact Gajits if you want to know more about this.

Breakthru's handling of samples sets it apart from the other current

Breakthru's handling of samples sets it apart from other current sequencer packages

sequencer packages. Samples in almost any format can be loaded in and played as virtual instruments. The audio output can be through the monitor, STE DMA Phono sockets or any of the Microdeal Replay cartridges. When used in conjunction with Replay 16 (also available through Gajits for £129.95) the results are excellent. This has to be the most cost effective way of including 16-bit samples in your music. An interesting spin off from this function is that the sequencer can be used without any MIDI gear attached to it at all. Simply load in some samples and use the step entry system to create music. Gajits have also shown some interest in providing an option to save these sample sequences in the

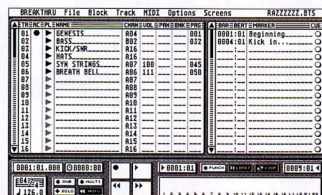
ever popular .MOD format. An implementation of the .MOD file standard on a fully featured MIDI sequencer would certainly be unprecedented and most welcome.

Verdict

Breakthru is an attractive package capable of accommodating your needs whether you're a new user or an old hand. A lot has been implemented that you would expect to see on more expensive packages and its handling of samples is unrivalled.

With competition in this price range growing ever fiercer, *Breakthru* manages to give an excellent account of itself. Bear in mind that many of the other packages in the sub £160 category are cut down versions of larger packages, and with *Breakthru* you are buying the full thing.

It is thoroughly refreshing to see a British software sequencer on the ST so well supported and under constant development. **stf**



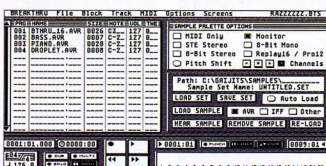
■ The main track screen enables you to change GM MIDI sound banks. The only thing amiss here is a velocity offset control...ah well, you can't have everything.

tridge fits into your ST's modem port. You then plug a MIDI cable into the extra socket and can now access the second bank of 16 MIDI channels.

Performance and features

Breakthru has been designed so that virtually all the editing screens have the same tape transport section and menu bar available at all times. Effectively, it is only the middle section of the screen that changes.

Consistency seems to be the key as extensive use is made of Gajits' Diamond Drag note-editing system. The way it works is, if you click on a single note in the Step Editor section for instance, a series of diamonds appears around that note. Each diamond performs a different function. The one to the note's right lengthens and shortens the note, the one to the left changes its start position and the one above the note changes its pitch. When changing pitch you can hear each



■ At last! A MIDI sequence that handles all samples - even the trendy 16-bit ones.



SPECIAL OFFER

You've read the review and started salivating at the thought of buying *Breakthru*, so, how about saving yourself £20? Turn to page 84, order your copy through our mail order department and you will get an amazing discount of £20 on both *Breakthru* and *Breakthru Plus*.

Breakthru

£129.95 (*Breakthru*)
£159.95 (*Breakthru Plus*)
Gajits ☎ 061 2362515
1MByte recommended,
medium or high resolution.

Highs

- Clear and easy to use Diamond Drag note editing system.
- Its handling of samples is unrivalled.

Lows

- You can't change the track variables while the music is playing.

What else?

- *Prodigy*, £130, The Digital Muse, ☎ 071 8289462. Handles samples and is a full MIDI sequencer.
- *Cubase Lite*, £99, Harman Audio, ☎ 0753 576911. No sampling, but a wonderful arrange screen.



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BIZ ACCOUNTS

When was the last time you had fun doing your business accounts? You should ask your ST to sort them out for you

Let's face it, sorting out business accounts is pretty damn tedious at the best of times. Just think about how much easier and more fun it would be if you left all the boring bits for your ST to do. All your ST needs is a good package that sorts out your taxes, generates quotes, receipts, orders and invoices, and produces reports telling you how your business is doing.

Biz Accounts is that package. No other program is quite like it. No other accounts package can offer such a range of features and they tend to concentrate on only one aspect of accounting like book-keeping or stock control. *Biz Accounts* can run on an STFM as long as you have a second floppy drive and on an STE with at least 1MByte. Add to this any ST compatible printer and you are all set to enter the world of easy and fun business accounting.

On your marks

The first thing you need to do is run the installation program which unarchives the programs and writes them to the destination of your choice. Unlike with a growing number of serious programs, you don't need a hard drive to run *Biz Accounts* smoothly – the author has thoughtfully made the package completely floppy drive compatible.

The emphasis is placed on holding as much data as possible in your ST's RAM, making the program blindingly fast to use when sorting data – sorting 1000 entries by date takes about 25 seconds for instance.

Once installed, you need to run the setup program. Here you input all the details of your business and set up the format for the forms you wish to use. You can also make lists of different types of expenses that you have to pay out of different accounts, this cuts down dramatically on the typing

when you're using the program. Once fully set up, you are ready to run the main *Biz Accounts* program.

The nitty gritty

Unlike other accounts packages for your ST, *Biz Accounts* enables you to automatically generate invoices, quotes, receipts and orders – these are neatly printed out ready for dispatch. The results are very professional-looking and don't look out of place in a pile of invoices. There is a convenient Print Preview function, so you can view the form before you commit it to print. Once printed, the transaction is automatically added to the main display.

The main display can be sorted in a number of ways; by transaction type, date and client – making it very easy to get at all the information you need. Extensive provision is also made for searching. Even with 500 entries in the list, searches are almost instantaneous in coming up with the data you want.

Whatever you do in *Biz Accounts*, there is always an error check – that is, a little dialog box asking you whether you really want to do what you've just asked it to do. You can also edit every entry you make or delete it completely.

Desk	File	Transaction	Edit	Utilities	Doc.#1	Doc.#2	Amount	Cash / R/C
Items	Date	Client / Reason						
0001	02/01/91	Entertainments	E	0001			-80.78	Bank
0002	02/01/91	Travel	E	0002			-45.58	Bank 2
0003	02/01/91	Petty Cash	E	0001			76.00	
0004	02/01/91	Bank Charges	E	0003			-37.19	Bank 2
0005	03/01/91	Capital Equip.	E	0004			-91.19	Cash 1
0006	03/03/91	Boiler Replacement	E	0001			-245.00	Cash 1
0007	03/01/91	Printing	E	0005			-29.19	Bank 1
0008	31/03/93	Collobus Electronics	I	0002 R			329.20	
0009	03/01/91	Stationery	E	0006			-1.13	Cash 1
0010	04/01/91	Components	E	0007			-22.07	Cash 1
0011	04/01/91	John Doe Associates	E	R 0002			54.00	Cash 2
0012	04/01/91	Entertainments	E	0008			-27.50	Bank 1
0013	05/01/91	Petty Cash	I	0002			50.31	
0014	05/01/91	Wilding Ltd.	I	0003			70.21	

■ The main work screen of *Biz Accounts*. As all the files are held in memory it is wonderfully quick to re-sort, edit and add data. Just click away and you'll soon be producing professional invoices and receipts as well.

Accounting can be fun

The most interesting feature within *Biz Accounts* is the Reports program. This gathers together all the information and works out taxes and shows you how your company is doing. These reports can be printed out and they represent a detailed picture of your business, quite useful for banks when deciding whether to grant you a loan as well as just for normal accounting purposes.

Biz Accounts is, on the whole, easy to use. There are one or two bugs though that need to be ironed out. If you call an Accessory and then wish to cancel it you are left with bits of the .ACC dialog all over the main screen. You can easily clear this by switching screens but this shouldn't be necessary. We trust that this will be remedied as soon as possible as it spoils what is otherwise a superb program.

The manual is clearly laid out and avoids using over-technical jargon, so if you're new to accounting, don't worry. There is no "Hold your hand" tutorial but all the functions are clearly described.

And finally...

Biz Accounts offers more than any other current accounting package available for your ST. It has a friendly environment and is stuffed full of useful features. You can easily run your own small or medium-sized business using this package with an absolute minimum of setup expense.

ANDY CURTIS

Desk	File	Transaction	Edit	Utilities	Doc.#1	Doc.#2	Amount	C/R
Items	Date	Client / Reason						
0001	02/01/91	Entertainments	E	0001			-80.78	-80.78
0002	02/01/91	Travel	E	0002			-45.58	-126.36
0003	02/01/91	Petty Cash	E	0003			76.00	-163.55
0004	02/01/91	Bank Charges	E	0004			-37.19	-254.74
0005	03/01/91	Capital Equip.	E	0005			-91.19	-345.93
0006	03/03/91	Boiler Replacement	E	0006			-245.00	-590.93
0007	03/01/91	Printing	E	0007			-29.19	-620.12
0008	31/03/93	Collobus Electronics	I	0008			329.20	-290.92
0009	03/01/91	Stationery	E	0009			-1.13	-292.05
0010	04/01/91	Components	E	0010			-22.07	-314.12
0011	04/01/91	John Doe Associates	E	R 0002			54.00	-260.12
0012	04/01/91	Entertainments	E	0012			-27.50	-287.62
0013	05/01/91	Petty Cash	I	0013			50.31	-237.31
0014	05/01/91	Wilding Ltd.	I	0014			70.21	-167.10
0015	06/01/91	Cash repayment	T	0015			81.54	-85.56
0016	06/01/91	Postage, Freight	R	0016			48.72	-134.28
0017	08/01/91	Mellfare Enterprises	E	0017				
0018	08/01/91	Quarter House Industrial	E	0018				

■ You can limit access to the Reports section so that your employees don't see how well you are doing and demand a pay rise. Here, all your profits and tax are worked out. The presentation is clear and easy to understand.

■ Use this address book to store all your clients' information or boot it as a standalone program and use it to list all your personal contacts – very handy.

SPECIAL OFFER

Now you know how handy *Biz Accounts* is, why not take advantage of ST's special offer? Pay only £69.95 and save £30. For more information about this and other amazing offers turn to page 84.

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£30

Biz Accounts

£99.95 Orpheus Systems,
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Highs

- Uses all your ST's RAM making it incredibly fast when searching and sorting.
- Has all the features you need to sort out your business accounts.

Lows

- There are still a few bugs in the screen display that need ironing out.

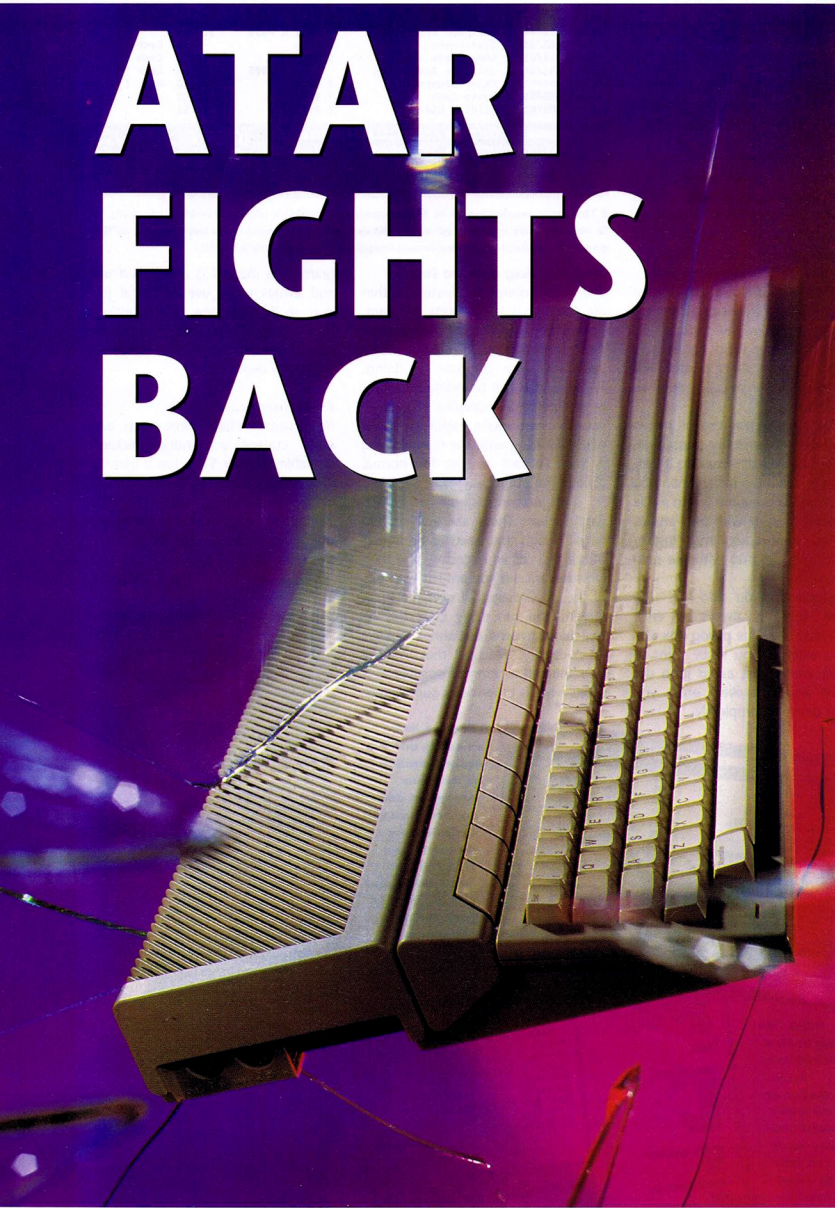
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- System 3, £39.95, Cambridge Business Software, ☎ 0763 262582.
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- A very successful book-keeping program.

84
UPDATING
VALUES

The news of the STFM price drop took you scurrying to your word processors last month. We took a look at your criticisms and asked Atari what they had to say about it all. Paula Richards does the honours

ATARI FIGHTS BACK



Last month we reported that Atari have reduced the recommended retail price of the 520 STFM to £159. This sparked off a storm of controversy. We've had letters claiming that slashing the price is a brilliant step and you can't wait to see the results in terms of more software in the shops, plenty more active ST users and, of course, a boost in hardware sales.

It's not all roses and new software growing on trees though. Many of you are rather more sceptical about the whole thing. Indeed, the only reason some of you could come up with for this move was that Atari are in desperate need of more money. Then there's their choice of machine – surely the STFM is outdated and too old? Wouldn't it have been better to concentrate on promoting new technology like the Falcon rather than digging the STFM out from near-prehistory? After all, if you just want to play games, you'll buy a Super Nintendo down at Smiths... and anyway, few games and very little decent productivity software runs on anything less than 0.5MByte. And what about Atari's advertising strategy? They're certainly going to have to wake up and get one together if this effort is to succeed. We put these cynical comments and doubts to Atari to see what reasoning they could come up with.

It's not all roses and new software growing on trees though. Many are rather more sceptical about the whole thing

Why the price drop?

Atari would like to convince us that they've dropped the price of the STFM "as an opportunity for retail sales," according to Darryl Still, their Marketing Manager. At first glance, the opportunity for shops to sell the STFM at a bargain price looks unnecessarily magnanimous – after all their profit margin on each machine sold can't be huge, even compared to the reportedly minuscule profits in selling consoles. And how would you feel if you were given the chance to sell units of what even the most die hard STFM owner considers to be out-dated technology? Probably not as if you'd just won the pools. What actually seems to be the case

is that the company are pushing this move as part of a long term plan to increase familiarity with the Atari brand name. The benefits to be gained by retailers are that they also get the chance to sell full-priced peripheral items like joysticks, hard drives and software – this has a knock-on effect and keeps the ST base alive and thriving. This is especially true since

The new, low-priced STFM is being aimed at those people who are interested in games but want more than just a console

Atari are concentrating on distributing machines through independent retailers who are more likely to be committed to selling you what you actually need, rather than only what's in the shop – as can be the case in the chain stores.

Long term investment is the key here. Atari hope that, by gaining STFM customers now, these

customers will want to upgrade to the latest technology when they've become more familiar with computers – providing Atari with an important part of the Falcon user base of the future.

But the STFM's outdated!

If you're committed to the latest technology, the STFM undoubtedly seems old. However, if you've never had a computer before and just want to experiment with all sorts of applications and games before deciding whether to splash out on the Falcon, for example, the STFM is an excellent choice. Still explained that the new, low-priced STFM is being aimed at those people who are interested in games but want more than just a console and are prepared to pay an extra £10 for these benefits – stressing that this ST is "an entry-level machine." The higher profile of computer games machines over the last few months will undoubtedly have raised the awareness of prospective console purchasers to what else is available. If Atari get their advertising and targeting spot on, they have a good chance of winning some of these customers.

There's already a huge library of all sorts of different types of software available to complement the machine – see that box down there for more details. So, the support's all there at a reasonable price, and that gives it a major advantage over the consoles and even over the latest 1MByte only and/or STE only software.

More RAM, please!

Undoubtedly there are going to be some people who want more than 0.5MByte of memory and a higher version of TOS straightaway. Well, look no further than your friendly computer supplier –

■ Atari hope that by introducing people to the STFM now, they will encourage them to "buy Atari" when they upgrade.

That bargain Discovery Pack

The £159 STFM package – named the Discovery Pack as was its predecessor – is intended as a machine to start you off in the world of home computing. To get new owners into the delights of the world of the ST, Atari are including a range of entry level software which can comfortably run with 0.5MBytes of RAM. You can get going with a handy Tutorial program and then get into the productivity packages themselves. To start, there's *First Basic*, an easy to use powerful introduction to programming and *Neochrome*, a low resolution well-featured art package for budding computer artists. There are also four games which, while they are hardly at the cutting edge of ST games development, all have an important place in the ST games market. There's *Space Harrier* which gives you fast and frantic arcade action, *Bombjack*, a devious and addictive puzzle-'em-up, *Outrun* which is a blisteringly speedy conversion of the excellent arcade game and finally *Carrier Command*, an excellent 3D war game.

**ONLY
£159**

■ *Carrier Command* scored a brilliant 91% in ST *FORMAT*, proof positive that you can play quality games on 0.5MByte machines.



plier – the chances are that he's doing a special deal if you buy the whole lot from him. A spokesman from Analogic Computers, who describe themselves as an official Atari repair centre, said, "If someone buys a £159 STFM and wants a memory upgrade – to whatever configuration – and a TOS upgrade, we shall be looking to give very substantial discounts." Analogic look as if they are supporting the move all the way, they confirmed, "The STFM should do very well at this price – you can have a games machine and learn something else at the same time."

Atari? Who are they?

If Atari don't advertise, no-one, apart from their present customers, are going to hear about the company, let alone trust them enough to buy a computer from them. They know this as well as anybody else and are planning their next forays to get their name banded about in the big wide world. Their strategy comes in two flavours; starting in May

there will be ads in computer magazines like ST *FORMAT*. Second there will be a European-wide TV campaign starting from September for the run-up to Christmas. They're presently working with software houses to show how Atari computers can exploit the power of software. Darryl Still explained that the campaign would focus on pushing the Atari brand name with the basic premise being that buying Atari means buying better hardware power. **stf**



■ Readers of all types of computer magazines are to be targeted in Atari's new ad campaign.

THAT HUGE LIBRARY OF SOFTWARE



As well as the vast numbers of games that run on a 520 STFM, there is a wide variety of productivity software available. For example, there's a selection of word processors including *Protext v4.3* and *First Word Plus*, or the document processor *Calligrapher Junior* which is rather like a mini DTP package giving you WYSIWYG. You can get more productive with busi-

■ Get started in art and graphics with *Spectrum 512* – it likes running on a 520 STFM and you can create wonderfully colourful pictures like this.

ness software like *Superbase Personal*, *K-Spread 4* and *Home Accounts 2*. Any of the programming languages work perfectly happily on a 520 as do a large selection of art and graphics packages like *Spectrum 512*, *Degas Elite* and *Deluxe Paint*. You can even get technically accurate with *GFA Draft*. Likewise, if you want to exploit your hidden musical talents you could do worse than choosing either the sample sequencer *Quartet* or the MIDI sequencer *Concerto* from our mail order pages (page 84).

And especially for that first time computer user, there's also a massive variety of educational software around – virtually everything runs on a 520.

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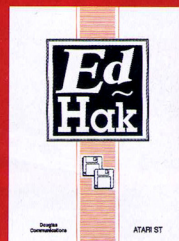
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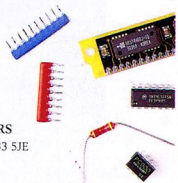
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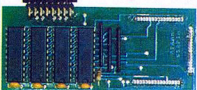


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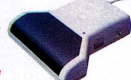
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ST ANSWERS

Are you going through confusing moments with your ST? Well, lie down, relax and share your problem with us

THE STF ADDRESS

Send all your ST related problems to ST Answers, ST FORMAT, 30 Monmouth Street, Bath BA1 2BW. Please indicate what sort of problem it relates to on the envelope.

BEGINNERS



If you are new to computing, look out for problems with this logo attached to them, they could help you along your way.

COMMS



Problems often occur when your ST is talking to another ST via a modem. If you need help, look for this icon.

DISKS



Take care of your disks - they carry lots of important information and are fragile. For advice, check this logo out.

GAMEs



Game cheats are covered by Rob Mead's Gamebusters on page 74, if you're having other troubles, turn to this logo.

GRAPHICS



Life would be rather boring without pictures, don't you think? If you've got a hitch with them, look for this icon.

HARD DRIVES



Hard drives, eh? Who'd have 'em? Well, actually, we'd all like one, please. If you already own one, this is the logo for you.

PRINTERS



Whatever you do, don't buy any old printer for £10, it probably won't work. If you've got other problems, look up this icon.

PROGRAMMING



The usual programming languages are all here this month. If you like bytes and stuff check them out.

SOUND



Your ST is one of the most powerful HMD tools that exists, but it might be a bit confusing, look up this logo for help.

ST PROBLEMS



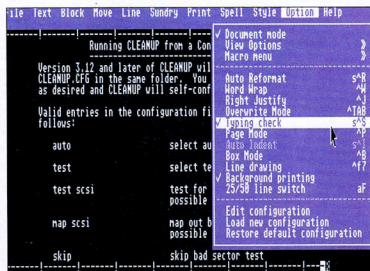
If your problem or question relates to your entire setup, or is a general ST query, this is the logo to look out for.

Perfect diction?



After installing your dictionary successfully for the excellent *Protext* 4.3, I found that while typing, the disk drive keeps accessing for no apparent reason, and this is followed by a beep. After that, I can continue with my work. This happens seemingly randomly, what on earth is going on? By the way, thanks for the dictionary, although it's a bit on the small side and contains some strange words. **Jethro Day, Stretton, Leicestershire**

■ If your *Protext* dictionary constantly beeps, then just disable the automatic *Spell Checker* which checks words while you're typing.



stf: The reason for this constant disk accessing and beeping when you are typing is because *Protext* is performing an automatic spelling check as you enter each word into the text. You can disable the typing check by going to the Options menu of *Protext* and clicking on the Typing Check

option so that the tick disappears. You can also change the configuration so that the Typing Check is off when you start the program, just follow these simple steps.

1. Go to the Options menu of *Protext* and select Edit Configuration, then go to the main Configuration menu and select the Spelling Checker options.
2. Press <S> to select Spell Check, pressing <Return> toggles the option on or off, turn it to off.
3. Press <Esc> until you get back to the *Protext* Configuration Program main menu and then press <S> to save the new details to disk.
4. Once the setup is saved press <Esc> to return to *Protext*.

The dictionary file we created was designed to get you started and only contains 28,000 words, that's all we could get onto the Cover Disk. You can expand the dictionary by merging your User dictionary with it at regular intervals. We also had to make sure that the uncompressed dictionary file

Easy as one, two, three



Mark Nias of Macclesfield has come up with a method of booting up the *Falcon030* in overscan mode:

1. Make a backup copy of *NEWDESK.INF* and rename it to *NO.OSCAN.INF*.
2. Load *NEWDESK.INF* into your favourite text editor.
3. Find the line that looks like this:
#E 18 02 00 1E 00 2A 00 00 00 00
change the 11th number to a 6,
#E 18 02 00 1E 00 6A 00 00 00 00
4. Save the file to disk with the filename *NEWDESK.INF*.

stf: When you boot the machine, GEM appears in overscan mode. You have to change the filenames of your .INF files to swap between modes, using a boot selection program such as *Xboot 3* which enables you to choose which .INF file your machine boots with.

Finally, don't forget that overscan mode uses more memory to display a screen, a 640 x 400 16-bit colour screen uses \$12,000 bytes of RAM and a 768 x 480 16-bit colour screen uses 737,280 bytes of RAM.



ASSEMBLY POINTERS



Tony Wagstaff dives into a pool of assembly problems

Blitter chip

How do I access the Blitter chip without using TOS?
Dillon Agoma, London

stf: The Blitter chip locations list on the opposite shows you where the various blitter registers lie in memory.

How you would use the chip depends on whether or not the destination that the block of data is to be moved to is on a word boundary. If it isn't, then the blitter must be programmed to shift the data block, and the sprite must move one plane at a time.

Suppose you have a set of 32 by 32 pixel sprites stored in memory as a Degas picture, and you want to blit one to screen so its right edge is at x=85, or five bits past a 16-bit boundary.

The skew register is set to five, the overlap past the boundary. The left

mask register is set to \$FFFF right shifted by the skew value. The right mask is the logical NOT of the left mask, and the middle mask is \$FFFF.

These masks ensure the background is not overdrawn beyond the edge of the sprite, and should not be confused with the sprite's mask.

The destination width for a shifted sprite is the same as the sprites width in words plus one to account for word boundary overlap, giving a value of three for a 32 by 32 sprite.

If the sprite is going to be word-aligned, then all four planes can be moved in one go, making the destination width equal to the sprite width in words times four.

The destination height is simply the pixel height of the sprite. The source x increment is set to the number of bytes to jump from one source word to the next. In low resolution, this is eight for a blit that is not word-aligned, otherwise two if it is word-aligned. Source y incre-

ment is the jump from the end of one line to the start of the next.

To calculate this for a non-aligned blit, multiply the destination width by two to obtain its value in bytes. Then multiply it by four to account for each plane. Subtract the source x increment from this, and finally, subtract this number from the total line width of the sprite picture, that is 160 bytes for a Degas picture.

For our 32 by 32 sprite this would be 160-(3x2x4-8). An unshifted sprite is calculated in the same way, but without multiplying by four as all the planes are moved at once.

The destination increments are calculated in the same way, and more often than not take the same value.

The logical operation takes the same values as the VDI VRO_CPYEM call. Once the source and destination addresses are loaded, set the hog bit, and finally, the busy bit to set the blitter chip rolling.



For the latest game hints, tips and cheats turn to this month's Gamebusters on page 74...

would fit onto a double-sided disk with the rest of the Protext files. We chose from several PD dictionary files in ASCII format ranging from 10,000 words to over 250,000 filling five double-sided disks, so we picked one that would fit snugly on the Cover Disk between Nigel Mansell's Grand Prix and No Second Prize. We admit that "abelbethmaachah" is an odd word, but then again, so is Amiga.

Want to play PC games?



If I fit a PC emulator in my 1040STE, will I be able to play games such as *Sim Ant*, *Civilization* and *Sim Earth* which haven't been released for the ST? If so, please can you recommend an emulator? Are they easy to fit?

Tracy Smith, Ongar, Essex

stf: PC emulators are designed primarily for use with business software and at £200 for a 386SX emulator (Silica Systems ☎ 081 309 1111) it's rather an expensive option. Most PC games use colour VGA anyway, so the software wouldn't run on your ST because the best colour any PC emulator can achieve is CGA. PC emulators are relatively easy to fit, but at £200 a time, you'd be better off getting a reputable dealer to do the job for you.

Civilization was finally released in late March and was reviewed in last month's ST FORMAT – turn to page 52 for your copy if you missed it. Unfortunately, Ocean (☎ 061 832

6633) have no future plans to release either *Sim Ant* or *Sim Earth* for the ST.

Double-clicking



1. I have some Double Click utilities and I was wondering if you could put some others on your Cover Disk so that I can complete my DC collection. I am after DC Desktop, DC Stuffer, DC Clk31 and DC Clock and any others that are available.

Duncan Taylor, Sussex

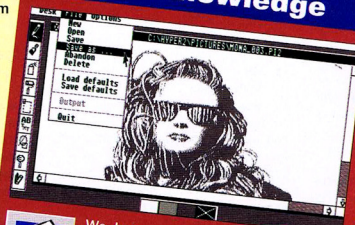
stf: 1. Although most DC programs are Shareware, DC Desktop is a commercial program. Most of the DC utilities are available from Goodmans International (☎ 0782 335650) on disks GD1813 and GD1164, including DC Stuffer. Goodmans disks are £2.75 each or £2.50 each for two or more. The STF BBS also has a wide selection of DC utilities, call ☎ 0225 465977, 24 hours a day, 8NT, up to 9,600 baud.

Lost utilities



I have a PD Desk Accessory utility called Back Track which plays sound module files in

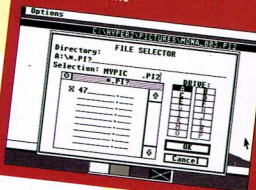
Book of knowledge



1 You need to set up a separate disk to store your pictures on. Get a new blank disk and format it using the Format option from the Desktop File menu. When you have loaded Hyperpaint eject the disk from the drive and insert the blank formatted disk, you use this disk to store your drawings on.



We have recently bought a 1040 STE Family Curriculum Pack for my seven year old son. We're having a few problems in understanding the Creative Computing Module. It seems like we can't save any pictures in Hyperpoint 2, there does not seem to be any instructions on how to do this. We were for absolute beginners? I Brown-Cameron, Newcastle, Staffs



2 When you save, a box appears on screen, this is called the File Selector box. Near the top of the box you can see a line that says "Selection: " - here you enter the name of your picture. You can call it anything you like up to eight letters long. The last three letters of the file name are added automatically by the program and tells the other applications what type of picture file it is.

the background on the Desktop. The problem is that the program has stopped working.

Although it's in the root directory of the disk, it no longer appears in the desk menu. Can you tell me where I can get another

copy of this utility?

Craig Burleigh, South Yorkshire

stf: AdLib PD (☎ 091 370 2496) specialise in music and MIDI software

Blitter chip locations

\$FFFF8A00 - FFFF8A1E
16 half tone RAM registers (one word each) used for special effects
\$FFFF8A20 source x increment
\$FFFF8A3A half tone operation
\$FFFF8A22 source y increment
\$FFFF8A3B logical operation
\$FFFF8A24 source address
\$FFFF8A3C
\$FFFF8A28 left endmask bits 0-3
line number
\$FFFF8A2A middle endmask bit
5 smudge
\$FFFF8A2C right endmask bit 6 hog
\$FFFF8A2E destination x increment
bit 7 busy
\$FFFF8A30 destination y increment
\$FFFF8A3D
\$FFFF8A32 destination address bits
0-3 skew
\$FFFF8A36 destination width bit
6 NFSR
\$FFFF8A38 destination height bit
7 FXSR

Sample sites

Could you tell me how to play samples through the DMA, including how to play four at once?

Phil Shore, London

stf: The DMA registers list below shows the memory mapped registers for the sound chip. Load your sample into memory, set the start and end address to the relevant addresses – the end address being the address just beyond the end of the sample.

Bit 7 of the sound mode register is cleared for stereo and set for mono, bits 0 and 1 determine the sample rate, 00 = 6258 Hz, 01 = 12517 Hz, 10 = 25033 Hz, 11 = 50066 Hz. The two low bytes of the sound control are 00 = stop, 01 = play once, 11 = repeat forever.

You can't play four samples at the same time. At most, using the STE's stereo capabilities you could play two mono samples. However, you can use Timer A to play samples one after

another – check out ST FORMAT issue 41 for further information.

DMA registers

\$FFFF8900 sound control
\$FFFF8902 start address high byte
\$FFFF8904 start address middle byte
\$FFFF8906 start address low byte
\$FFFF8908-9C address counter
\$FFFF890E-12 end address
\$FFFF8920 sound mode

Hidden sprites

I am in the process of writing an assembly program, and I am having trouble with drawing sprites. Now, how would I go about moving sprites when they are positioned behind particular on-screen objects such as trees and fences?

Secondly, how would I make my vehicle simulations work in similar circumstances?

George Papaioannou, Greece

stf: If the sprite is in a position where the tree or fence is completely obscuring it, then the simplest thing is not to draw the sprite! If you want the sprite to be partly visible though, as it would be through some railings for instance, then you might consider the objects themselves as sprites.

Design the tree or railings with a suitable mask, using a product like Animator – yours on Cover Disk 37. Draw the background to the screen first, followed by the sprite mask and data, and finally add the mask and data of the obscuring object.

The type of simulation you describe is rather complex and involves some tricky computation. Explaining it in detail would fill an entire book, which is just what Andrew Tyler did in *Real-Time 3D Graphics For The Atari ST* – ISBN 1-85058-217-3. This book extensively covers everything you'd ever need to know – and more – about producing stunning 3D simulations.



STOS CORNER

Billy Allan solves some of the mysteries that surround STOS programming

Sluggish scrolling?

In the game *Slug 2092* there is a colourful scrolling screen, how do you do this? There is also a scrolling text reader. How do I write one of these? When I save a picture in the middle of a Fade the palette is always black, how can I stop this?

Shayne Jennings, Godmanchester

stf: The routine in *Slug* was written in assembly language, but this little STOS routine gives a similar effect.

```
10 key off : hide : ␣
    curs off imode 0
15 palette 0,0
20 reserve as work 10,1024
30 R=2 : G=1 : B=1 : ␣
    SR=1 : SG=1 : SB=1
40 for T=0 to 65
50 doko start(10)+T*4,R*256+␣
    G*16+B
52 doko start(10)+T*4+2,R*16+G
55 R=R+SR : if R>6 or R<1 ␣
    then SR=-SR
56 G=G+SG : if G>6 or G<1 ␣
    then SG=-SG
57 B=B+SB : if B>6 or B<1 ␣
    then SB=-SB
70 next T
75 for T=1 to 100 : print ␣
    "ST FORMAT "; next T
80 CL=$FF8240 : S10=ststart(10)
90 for T=0 to 40*4 ␣
    step 4 : loko CL,leek␣
    (S10+T) : next T : wait␣
    vbl : goto 90
```

The way to write this routine is to copy the font directly from a memory bank to the screen using PEEK and POKE. It also uses the SKOPY command from the *Misty* extension to scroll the screen as SCREEN COPY is too slow.

```
10 key off : hide : ␣
    click off : mode 0 : ␣
    curs off
20 if length(5)=0 then ␣
    reserve as set 5,charlen␣
```

for the ST, for £1 plus a stamped addressed envelope they can replace your non-working program.

Soft TOS?

Is TOS 2 available as an Auto folder program rather than a hardware upgrade – a friend of mine insists that he knows someone with this program. If there is such a thing available, where can I get it from? If it isn't, where can I get a hardware upgrade from for my STE?

Douglas Sopp, Bournemouth

stf: There was a pirate pre-release version of TOS 2 circulating on disk a few years ago and this sounds like

```
(1) : charcopy 1 to 5
30 if length(10)>0 then goto 60
40 reserve as data 10,2000
50 for T=0 to 1999 : ␣
    poke start(10)+T,␣
    rnd(25)+65 : next T
60 SS=ststart(5)+264 : ␣
    S10=ststart(10)
70 H=0 : SX=1 : SX2=7 : ␣
    logic=back
80 rem= Main loop <
90 for Y=0 to 7
100 skopy 1,physic,0,1,320,␣
    200,logic,0,0
110 SCR=logic+31840
130 X=0 : for T=H to H+39
140 P=peek(S10+T)-32
150 V=peek(S5+P*8+Y)
160 poke SCR+X,V
170 X=X+SX : swap SX,SX2 : ␣
    next T
180 screen swap : wait vbl
190 next Y
200 SX=1 : SX2=7
210 H=H+40 : if H>1999 then H=0
220 if inkey<>" " then goto 90
230 default : end
```

To ensure that the palette is correct, you have to add get palette (logic) : wait vbl to your program just before you save the picture.

Mask of the red death

I am writing a program which enables me to load in files via the file-selector. The thing is, I want to use the extension of the currently selected file as the search mask of the selector. Can you help?

Edward Freeman, Birmingham

stf: The easiest way to do this is to use the STOS commands INSTR and MID\$. INSTR is used to search for the occurrence of one string within another and MID\$ is used to grab characters from a string. This program keeps displaying a fileselector, getting a new mask each time.

```
10 MSK$="*,*"
20 F$=file select$(MSK$,␣
    "Select a file",4)
```

what your friend has. Because it was a pre-release version of the operating system, it is not complete, that means that there is a high risk of data loss when accessing hard and floppy drives. There is no official software version of TOS 2.06 available from Atari. If you want an excellent TOS 2.06 hardware upgrade for your STE then we recommend the T-Board 68 from Compo Software (☎ 0480 891819). For more information, check out our feature on TOS 2.06 upgrades starting on page 31.

Screen savers



I have seen a number of screen savers that blank the screen on the ST, but I have seen none to

```
30 if F$="" then end
40 I=instr(".,",F$)
50 if I=0 then goto 20
60 MSK$=("*"mid$(F$,I,4))-""
70 goto 20
```

Unexpected caller

I have written several small assembly routines which I wish to call from STOS using the CALL command. Unfortunately, one of them requires more parameters passed to it than are available with DRBG and ARBG. Is there any easy way around this problem?

James Bright, Perth

stf: Probably the easiest way around this is to use an array to hold the parameters and pass its address to your program using the VARPTR command, which returns the address of a given variable. For example, if you needed 20 parameters then your STOS program would be something like this.

```
10 dim PRM(19)
20 for T=0 to 19
30 PRM(T)=rnd(100)
40 next T
60 areg(0)=varptr(PRM(0))
70 call 15
```

Now to read out the parameters in your assembly routine, just keep moving long words (four bytes) from A0.

```
prog: move.l (a0)+,d0
    move.l (a0)+,d1 ; etc...
```

And finally

As you know, if there is a BASIC file called AUTOEXEC.BAS in the root directory of the disk you ran STOS from, it automatically loads and runs. However, STOS can also auto-run any other BASIC file providing you install it as an application. To do this, highlight BASIC207.PRGM on the Desktop. Now go to the Options menu and select Install Application. Where it says "Document type" enter BAS and click on Install, then save your Desktop. Now when you double-click on a BASIC file, STOS automatically runs and executes it.

compare with the offerings on my friend's PC which has logos and lines whizzing about when it idles. Is there anything similar for the ST? **P D Burkin, Hockley, Essex**

stf: There are screen savers around for the ST, several of which we featured in our Matching Tie and Handkerchief Desk Accessory feature in STF 44. The four we featured were Rubriks (on Cover Disk 42) which turns the screen into a sliding puzzle, Idle which turns the screen into a starfield with a bouncy Fuji symbol wandering about, Stars and Starstruck which both turn the screen into a small version of the *Starship Enterprise* viewscreen with stars rushing toward you from the centre of the screen. All of these are available from

any of the PD libraries featured in the directory on page 95.

Dark torch



I have an ST and a Selkosh SL 92 printer. Although I can print text perfectly from within word processors, I cannot print graphics from art programs such as *Degas Elite* and *Deluxe Paint*. When I press <Control> and <Help> all I get is a dark band, what is the problem?

A M Gomes Sousa, Portugal

stf: Your first problem is that you're using the wrong key combination, it's <Alternate> and <Help>, not <Control> and <Help>. Secondly, this only works as a screen dump when used in combination with 9-pin Epson printers. Have a look at your printer manual to see what emulations your printer is capable of and set it up for Epson or IBM emulation, this is usually done by altering DIP switches. All Selkosh printers have Epson emulation built-in. You can then use the Print option from within your graphics program to select the appropriate Epson driver and produce a printout.

Unknown to mankind



A friend has given me an old printer made by Transtal Communications Ltd, a Comprint model. It is a parallel 9-pin dot-matrix printer but I cannot get it to work with my 1040 ST. I know the printer works because I have tested it on a friend's PC, why won't it work on my machine? I have no manual to help me. How do you know where I can contact Transtal?

R H Johns, Plymouth

stf: After extensive enquires, including hiring a private detective (well, not quite), we have been unable to trace Transtal. However, your best bet is to find out what printer driver your friend is using on his PC and choose the same driver from within your applications. If this fails, then all you are unfortunately left with is the process of trying all printer drivers until you find the one that works.

Missing characters



I use 1st Word Plus v2.02 and I am having problems with selecting foreign characters for my Spanish assignments.

In 1st Word, all the characters I need to use are all displayed in a large box, although this is present in 1st Word Plus, the characters I need to use are not. I also need the medium resolution fix for my STE.

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192 CPS 136 COLUMN



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GFA BASIC SURGERY

Sometimes, just sometimes, programming in GFA Basic can prove a little tricky. When this happens, and you don't know who to turn to, Mac Marsden, STF's very own expert, steps in

Auto-exec trouble

When I run a compiled program that is placed in an Auto folder, it starts up in low resolution on a colour monitor, how can I start my program in medium resolution from an Auto folder? Can I execute other programs in GFA Basic? I tried with the EXEC command but it would not work.

Bart Tas, Ternat, Belgium

stf: The problem that you have here is not with GFA Basic but with the DESKTOP.INF file on disk, it would appear that you have not actually told your ST to boot-up in medium resolution.

So, either you don't have an information file on disk or it's set to boot-up in low resolution. What you need to do is to go into medium resolution and choose the Save Desktop option, this then writes the DESKTOP.INF file to your disk, once done you should have no further problems.

You can execute other programs in GFA Basic with the EXEC command. The particular problem with the EXEC command is that you need to reserve free memory for the program to run in, for more details see ST Answers, ST FORMAT 43.

Picture theft

Gad Zeitune from Israel asks if it is possible to convert pictures to the GFA language? "Can pictures be put into the GFA programs I write so people won't be able to alter them?"

stf: That's the thing with computing, whatever you do you can't stop people copying and stealing other people's ideas and pictures. What you can do though, is make it as difficult for them as you possibly can. GFA Basic uses a 32K block of data as a picture with no resolution or colour information.

This 32K block can be included within your program by using the INLINE command (see ST Answers, ST FORMAT 42) so that they do not appear in your root directory or in a folder, and are easily picked off. Once your program is up and running, use an executable program packer such as Speed Packer v2, which reduces the size of your program, making it unreadable to anyone trying to grab your pictures or trying to alter your program.

Driven mad

I am trying to write a program which involves reading and writing data to different disk drives both external and internal. I have looked through the manual and cannot find any command(s) to do this from GFA Basic, can you help me please?

Darren Davies, Looe, Cornwall

stf: We suggest that you take another look at the GFA Basic manual, page 152, Directory Handling. The following commands perform the functions you require.

DFREE(n) - Returns the amount of free space on drive n. **PRINT DFREE(0).**
CHDRIVE n or **n\$** - Set the default drive - that is, **CHDRIVE (1)** or **CHDRIVE ("A")** sets the default drive to your internal drive.
DIR\$(n) - Return a string holding the current access path for drive(n) as set by **CHDRIVE(n)**.
CHDIR name\$ - Sets the current directory, which must be on the current specified drive as set with **CHDRIVE(n)**.
(n) = Integer between one and 26 (drives A-Z)

Thick?

Rodger Williams from Deal in Kent writes: "Can I alter the thickness of a line that is drawn on the screen by the command **LINE x,y,x1,y1** or **DRAW to x,y**? Also, can I draw a filled rectangle where I can get the filled pattern without a border?"

stf: The answer is yes to both questions. If you use the command **DEFLINE [Style],[Thickness]**, [begin_s,end_s]

where:
Style 1 = Solid, 2 = Long dashed, 3 = Dotted,

Where can I get this from and how much does it cost?

Allen Halmshaw, N Humberide

stf: In 1st Word Plus, the characters available in the window depend on the printer driver selected. You don't specify whether you are printing out your assignments or saving them as text files. If you are not printing

them out, then try loading in a few different drivers by clicking on the line at the top of the character box where the printer name is displayed. If you do use a printer, you may be able to use a different printer driver and still be able to print; experiment until you get the results you really need.

Allen, just for you, we have put the medium res fix for TOS 1.6 on this

month's Cover Disk. Take a look at the instructions on how to use the fix starting on page 12.

Hunt for the lost reactor

I've been playing Space Quest 3 for six months now, and can't get any further than the grey

ship in the junk freighter. I've gone up the conveyor belt, picked up the warp motivator, dropped it in the ship, gone down the tube in the computer room, climbed up and taken the ladder and entered the ship - but the diagnostic computer says there's not enough power. Please help me.

James Bird, Derby

stf: It sounds like you've forgotten to pick up the reactor. Here's what you need to do: after you land in the pile of rubbish, walk to the west wall and get the reactor from the hole. Walk north-east and climb the ladder. Walk north to the start screen and then right through the tunnel until you get mugged by a rat who takes the reactor.

Go back to where you originally found the reactor via the rubble lift and pick it up again. This time when you're at the top of the ladder pick the ladder up and go back to the red tunnel. Walk to the first bit of wire and pick it up.

Walk east until you get to a massive robot's head and enter his right eye - don't fall over the edge. You're now in the spaceship room. Drop the ladder in front of the engine, climb it, walk slowly to the hatch and enter it. Once inside, drop the reactor. One wire is too short, so use the one you picked up.

Sit down and look at the screen. Click on the radar, then the engines. Now you can take off. Click on the weapons screen and activate the front shields. Fire your lasers. And now you can fly out.

Gonna get myself connected

After recently buying a Falcon030, I had a problem trying to obtain the adaptors (Atari part no. C303109-001) to hook up a VGA (15 pin) monitor.

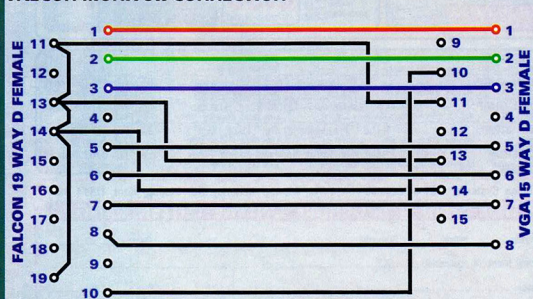
I managed to get a diagram and spoke to Atari who helped by giving me the correct connections. Atari now tell me they have the adaptors in stock, so there should be no problems getting them. If you are impatient and can't wait or would prefer to do it yourself, I

have included the Maplin part numbers so you can make up your own lead.

The diagram of the 19-pin D connections in the very first Falcon030 manual are marked incorrectly. So, ignore them, and follow the one below.

All the new machines, however, have had a revised insert with the correct pinouts.

FALCON MONITOR CONNECTION



The pin connections are as follows:

Falcon Monitor to	VGA (15 Pin)
1. Red	1. Red
2. Green	2. Green
3. Blue	3. Blue
5. GND	5. Control Bit
6. Red Gnd	6. Red Gnd
7. Green Gnd	7. Green Gnd
8. Blue Gnd	8. Blue Gnd
10. GND	10. GND
11. GND	11. GND
13. H-Sync	13. H-Sync
14. V-Sync	14. V-Sync
19. MO (connect to Gnd)	

Pins 11, 13, 14 and 19 should be linked at the Falcon end of the lead.

Maplin part numbers	
15W D Skt Shell JW82D	£0.98
15W D Skt Hood FP28F	£0.68
Skt Pin JW84	£0.56
(qty 2)	
19 Pin D skt JZ18U	£0.98
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1 metre	
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For further information call Maplins direct on 0702 554161.

Larry Green, Compuserve 70374, 1255, STF BBS, Laz Green



4 = Chain linked, 5 = Dashed, 6 = Dash dot dot,
7 = User defined.
Thickness; Sets the width of the line and must be an
odd number.

begin_s, end_s ; May be omitted, but these enable
you to set the start and end symbols of the line;

0 = Square : 1 = Arrow : 2 = round.

If you place the command **BOUNDARY 0** at the begin-
ning of your program it enables you to draw filled
objects without a border being drawn around it.

Of mice and men

I am writing my first GFA Basic program and would
like to use the mouse as a pointer and to be able to
control the outcome of pressing the mouse but-
tons, please can you help?

Martyn Smith, Blackpool

stf: The mouse pointer may be monitored by the use
of the **MOUSEX** and **MOUSEY** commands, which give you
the x and y coordinates respectively. As for using the
mouse buttons, they can be accessed by looking at
them for the following values.

MOUSEX = 1 [Left button pressed]
MOUSEX = 2 [Right button pressed]

MOUSEY = 3 [Both buttons pressed]

Also, if you just wish to exit a loop or function you can
look for any mouse button being pressed by using the
following routine.

```
DO ! Program loop.
  program statement ! Your program.
  " " " "
  " " " "
  LOOP UNTIL MOUSEX ! Loop until any mouse button
  is pressed.
```

The last line in the program can be altered to look for a
specific mouse button being pressed, if you want to
look for the left mouse button being pressed for exam-
ple, you would use;

```
LOOP UNTIL MOUSEX=1
```

Joystick jinx

Is there an easy way to program a joystick when
using GFA Basic?

Donald Wyatt, Liverpool

stf: Yes, Donald, using the commands **STICK m**,
STICK(p) and **STRIG(p)**.

STICK 1 causes your ST to supply joystick information.

STRIG(p) returns the state of the fire button. The fol-
lowing short program should solve your particular pro-
gramming problem.

```
X%=100 ! X & Y START COORDINATES
Y%=100
REPEAT
  A%=STICK(1) ! GET STICK INFORMATION
  FIRE!=STRIG(1) ! GET FIRE BUTTON.]
  INFORMATION
  SELECT A% ! LOOK AT THE VALUE ]
    HELD BY A%
  CASE 4 ! MOVE LEFT
    SUB X%,1
  CASE 8 ! MOVE RIGHT
    ADD X%,1
  CASE 2 ! MOVE DOWN
    SUB Y%,1
  CASE 1 ! MOVE UP
    ADD Y%,1
  ENDSELECT
  PLOT X%,Y% ! PLOT PIXEL ON SCREEN.]
  UNTIL FIRE!
  WHILE STRIG(1) ! WAIT UNTIL FIRE BUTTON.]
  IS RELEASED
  WEND
```

Other CASE numbers used for diagonal movement are;
5 = Left up, 9 = Right up, 6 = Left down
10 = Right down.

Corporate catalogue



Do Atari Corporation
produce a brochure of
all genuine Atari add-
ons, both hardware
and software such as the overscan
board, MultiTOS, the Lighthouse
Tower case and so on? If not, is
there a company that specialises in
such items?

Duncan Cooper, Gloucester

stf: Most add-ons for the ST range
are not actually produced by Atari
themselves, but you could contact
their sales office on 0753 533344
for details of their products, such as
MultiTOS and the Falcon030. The
other items you mention are available
from System Solutions, give them a
ring on 0753 832212 and they will
be glad to send you details of their
extensive Atari range of hardware
and software add-ons.

Mac-like disks



I have a couple of ques-
tions about disks and
the ST.

1. Is there a utility pro-
gram which displays the actual disk
volume name under the floppy disk
icon instead of the words "Floppy
Disk." Preferably I would also like
the utility to change the name of
the volume to the new disk volume
when a new disk is inserted in the
drive in the same way that
Macintoshes do.

2. What is the disk volume label
used for anyway?

James Grimwood, Oldham

stf: 1. There is no utility that dis-
plays the disk volume name with disks
on the ST, although it should be possi-
ble to write such a program.

2. The disk volume name is used
purely for easy identification purposes
and is a carry-over from early CP/M
systems. On all modern operating sys-
tems using a volume name is not
necessary because a unique ID num-
ber is generated when a disk is
formatted, it is this ID number which
the operating system uses to spot a
disk change.

Dead keys



I have a problem with
the keys on my STE.
When I boot up the
shift keys, most of the
bottom row and the right hand
side keys don't work. It is under
guarantee, but I have taken it back
to the shop where I bought it twice
already, and they cannot fix it.
What is the problem?

Justin Jani, Armagh, Co Tyrone

stf: You definitely have a faulty key-
board. This sort of problem can be
caused by something as simple as a
single broken connection from the
keyboard membrane. If the shop you
bought it from cannot repair it then
they should provide you with a
replacement keyboard.

If your machine is still under
guarantee take it back to the shop
and demand that they sort it out. If
they don't help, then contact your
local trading standards office and
give them all the details.

Falcon emulates Amiga



I am considering buy-
ing a Falcon030. Is
there such a thing as an
Amiga emulator and, if
so, how much is it? Do present ST
programs run on the new machine?
Are you going to be covering
Falcon software in ST FORMAT until
a specific magazine comes along?

J Henderson, Middlesbrough

stf: An Amiga emulator would be
technically possible on the Falcon030
but it is unlikely that anyone would
want to restrict their Falcon to the
limited abilities of the Amiga A500,
A600 or A1200. Most GEM based
software and some games are going
to be able to run on the Falcon with-
out problems. You have noticed that
this issue marks the beginning of our
Falcon reviews - check out the True
Paint and Musicom reviews on pages
83 and 80 respectively.

Can the Falcon be a Mac?



I use Spectre GCR (the
ST Mac emulator) with
my ST setup to do work
at home and I was won-
dering if there is going to be a
similar Mac emulator for the
Falcon030. If there is, how much it
is going to cost? How does it com-
pare to a real Mac speed-wise?

C Donnoven, Bridgend

stf: Gadgets by Small are working
on the Falcon version of the Spectre
GCR and it should be ready soon. It
will be a completely internal device

and is probably going to cost about
the same price as the current Spectre,
that is, approximately £300. The
emulator is said to be very fast
indeed, figures faster than a Mac
Quadra have been quoted by various
sources. Let's wait and see.

Decompress it



Richard Lim of London
has uploaded this handy
tip for decompressing files
to the ST FORMAT BBS.

"If you have more than one win-
dow open on your Desktop and
want to run something from a win-
dow which is not the top one - that
is, not the selected window, but
one that is underneath - hold
down the right mouse button as
you select the item. The item is
now selected and the top window
is also still selected.

"OK, this might not sound
very useful, but it is - this is
because the program which is run-
ning thinks that it has been run
from the top window.

"A good example of how use-
ful this actually is, is when you are
working with the self-extracting
LZH/ZIP files. If you have two disk
drives for example, instead of copy-
ing the file from drive A to drive B
and then extracting it in drive B,
you can open A and B. Then, while
B is the top window, hold down the
right mouse button and click on
the self-extracting archive that is in
drive A - the file then extracts itself
from drive A to drive B. This can
save you a lot of time."



MUSIC AND MIDI

Andy Curtis irons out some of this month's music and MIDI problems

Exclusive requirements

I have recently acquired a 1040 STE, which I've upgraded to 4MBytes. I hope you can help with these music problems. I've got an Alesis SR16 drum machine, saving sounds can be either through tape or MIDI – are there any standalone programs which I can save my drum patterns to, and then send back into the machine. I have Pro 24, Cubase and Pro 12 from your magazine (ST 39) and I'm a bit unsure if I can save it in these programs, or if I can – how?

I've got an old sampling keyboard – Ensoniq Mirage, and I'd like to edit these samples using my ST. Are there any programs which do this? Can you name any good score-writing programs which print out full self-composed MIDI files on A4 paper and not just one track or save at a time?

R F Ellis, Bristol

stf: Of the three sequencer packages you have, Cubase is far and away the finest. All are by Steinberg but Cubase is their most recent and fully featured production. It has no difficulty recording all types of system exclusive information. If you set the sequencer to record and feed the MIDI output from your SR16 into the MIDI In port of your ST, then all panel information is recorded as a system exclusive MIDI file. If you then lose the settings on the machine, you can restore them by setting the drum machine to receive data and simply playing the file.

Unfortunately, we don't know of any ST editing software for the Ensoniq Mirage. It may be a little too old to have benefitted from the attentions of an ST Software writer. If it supports the standard MIDI sample format at all then it may be possible to edit the sounds with a generic editor such as Avalon, £299 from Harmon Audio, Steinberg Division. For more information, call Harmon Audio on 0753 576911.

You need to look no further than your Cubase program for score printing. With a little care and attention and close reference to the manual you can get it to print attractive scores on A4 paper. Some work is needed but most printers are supported, as are a range of score-writing fonts.

Extra sound

Can I buy some hardware to connect hi-fi speakers to my Atari STF? Like a cartridge with phone outputs or something like that.

Jean Fouqueret, Brussels, Belgium

stf: Why not buy a package called Playback (£30.95 from Microdeal), call +44 (0)726 68020 for further information. This cartridge feeds your ST's sound output through a pair of stereo phone sockets into which you can plug your hi-fi system. Easy.

How good is my ST?

Having recently acquired my Atari 1040 ST, I'm standing in newcomer's corner with my hands on my head trying to stop my brains bursting out. The Music Maker 2 program is rather cool, but is there any way of playing MIDI instruments, Music Maker 2 drum kits and instruments so you can adjust mixing levels on all above as well as recording and playing them all back at the same time?

Is it possible to use my ST as a studio, and, if so, how many tracks is it capable of reproducing? What software do I need to be able to sample, record, mix and playback with effects? All I really want is my own little private recording studio, I thought the ST was the answer to all my prayers – is it?

"Big" Harry, Glossop

stf: Welcome to the big wide world of music making on your ST. We fear that your idea of what is possible with your shiny new ST may be a little on the optimistic side. However, your ST is invaluable as you start to build up your recording studio.

Most sequencers enable you to adjust MIDI Volume levels as you build up pieces of music. Some, like Cubase, Notator and others, have complex MIDI mixing sections in which many parameters can be edited. If you have a large number of MIDI sound sources you still need a comprehensive mixing desk with at least 12 inputs. This is because your sequencer is sounding all your instruments at the same time and you need to mix them externally as well as via MIDI. There are only a very few sequencers at present that are able to replay samples simultaneously with MIDI data. The new

Tip of the month

Expand your MIDI

Occasionally there comes along a product in the MIDI and music arena which offers such startlingly good value for money that we cannot let it pass without a mention. Such a product is the 16+ Cartridge from Hands On MIDI. How often have you wished that you appointed by the cost of such products as MIDEX from Steinberg (around £300)? Enter the 16+ cartridge for a tenth of that price! The cartridge fits neatly into the modem port on the back of your ST MIDI output. The device is compatible with most popular sequencers and is extremely easy to install. We had it working in minutes with Cubase, Cubase V2, Notator and Gajits' new Breakthru sequencer. If you give Hands On MIDI a ring they can tell you if your sequencer is compatible with the 16+ cartridge. They can be contacted on 0705 221162. The price is £29.95 plus postage.

Breakthru sequencer from Gajits (£129.95, call 061 236 2515, or turn to page 84 for an amazing special offer) can handle even 16-bit samples, well worth a look at if you are interested in this area. The full review of Breakthru is on page 42.

It is fair to say that your ST can be the heart of your studio but it may be stretching the truth a little to claim that it could be a complete studio in itself. Provided you have the polyphony and memory available, some sequencers enable an unlimited number of MIDI tracks. With most sequencers the least you have to play with is 24 tracks – for most pieces this is sufficient.

To effectively sample, record MIDI, mix and play back with effects you really are going to need more than just software. To do all the things you require you need to spend a significant amount of cash on hardware items. The real power of your ST in all of this is its excellent handling of software sequencers.

These days there are a great number of sequencers available, and what they do best is control MIDI output to your external sound sources – be that a keyboard, a drum machine or an additional expander. Try not to fall into the trap of thinking that your ST is a complete and self-contained music making tool. Remember that the best tape recorder in the world can't make a decent cup of tea to save its life.

Any questions?



I have just bought a second hand 48MByte hard drive for my 1040 STE and I am a bit confused by some of the boot-up messages I get on-screen. The line "AUTOROM VO 1 – Read clock and ROM V 1.20 inst" appears along with a message saying that GDOS v1.1 is installed. Do I need to reset the hard drive because I have TOS 1.62 in my machine? How do I disable the autoboot items I don't want to use to save space? The drive is already formatted into three partitions approximately 16MBytes in size, should I repartition it? Would you suggest running games from the hard drive or do they take up too much room? Finally, is there a program that can tell me what size SIMMs I have installed in my machine?

Frank Etchells, Frome, Somerset

stf: The boot messages you are getting are about your hard drive, not your STE, so don't worry about them.

The best way to disable GDOS is to change the last letter of the file name to an X, use the Superboot utility we gave you on Cover Disk 36 because it is ideal for organising your hard drive. It enables you to select which Auto programs and Desk Accessories you wish to run when you boot-up your ST. The three partitions you already have are just about the correct size, and there is no need for you to repartition your drive.

Unfortunately, most ST games are not hard drive installable so you still have to run them from your floppy drive.

Finally, if you have a 1MByte STE then you have four 256K SIMMs in your machine because this is the only possible configuration for a 1MByte STE.

DMA chip



I read with interest your reply to a query about the DMA chip problem in which you stated that Atari could tell if the

chip needed changing purely from the serial number of the machine.

I contacted customer services at Atari and they told me that this information was incorrect, and that they could only tell me if it was faulty or not by examining the machine itself. I cannot afford to send my machine to Atari on the off chance that it is faulty.

Brian McMahon, Corby, Northants

stf: We have contacted Atari customer services – who gave us the original information – and they have told us that the only way to check the machine is to physically examine it. However, they do stress that there is no need to send your STs in for checking unless you are actually suffering from data loss problems with your hard drive.

They would also like to highlight the fact that there is only a very small percentage of STs that are fitted with the older DMA chips. Atari can be contacted for additional information on 0753 533344.

Molecular modeller



I am a graduate student in Immunology and I do a great deal of work involving proteins. I use the Antic Genesis Molecular Modeller to help me in my work.

Are there any other software packages that can generate 3D protein representations and do you know of any other 3D programs that work with the LD Technologies Stereoscopic glasses?

David E Anderson, Davis, California

stf: Try Molgraph 2 from the ST Club (+44 602 410241), it costs just £24.95 and works on all STs. We don't know of any other software that uses the Stereoscopic glasses.

If you have any ST-related problems or queries that you would like the ST Answers team to tackle and answer, send them in to ST Answers, ST FORMAT, Beaufort Court, 30 Monmouth Street, Bath, Avon, BA1 2BW.

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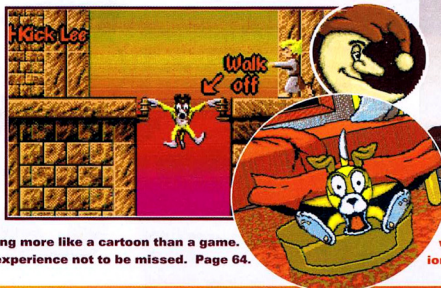
SCREENPLAY

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SLEEPWALKER

■ There are platform games and platform games - but this is one of the best ever released for your ST. *Sleepwalker's* fast, funny and furious - and that's just the gameplay. The graphics and sound are amazing, looking more like a cartoon than a game. Definitely an experience not to be missed. Page 64.



■ Rob Mead is ST's games guru - whether you want an honest opinion or a handy cheat, he's your man.

CRYSTAL KINGDOM DIZZY

■ The Incredible bouncing egg's back with a vengeance in this eggotting tale of stolen treasure and imminent disaster for the Yolkfolk. See if you can help Dizzy out by solving puzzles and getting to know his mates. Page 72.



Gamebusters - page 74

This month, for your delectation, we have:

- A complete solution to *Street Fighter 2*
- The second part of our solution to *Ishar*
- The first part to the classic *Operation Stealth* solution
- A detailed cheat to the god game *Utopia*
- Plus! Get infinite lives and level skipping hints and tips for games galore

■ Keep the upper hand in *Street Fighter 2* with our solution and in-game poke from Gamebusters.



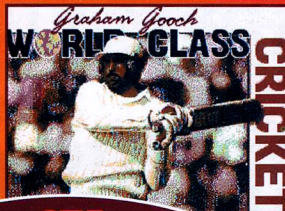
COHORT 2

■ Go into battle and win! This engrossing strategy war game enables you to become the victor and rewrite history - assuming you do everything correctly. Just pick your troops, plan your actions for world domination and the universe could be yours. Check it out on page 70.



WORLD CLASS CRICKET

■ With the summer just around the corner it's an ideal time to get into your white jumper and trousers, plonk yourself in front of your ST and try and figure out the rules of cricket. There's no better place to start than with *World Class Cricket* - page 68.

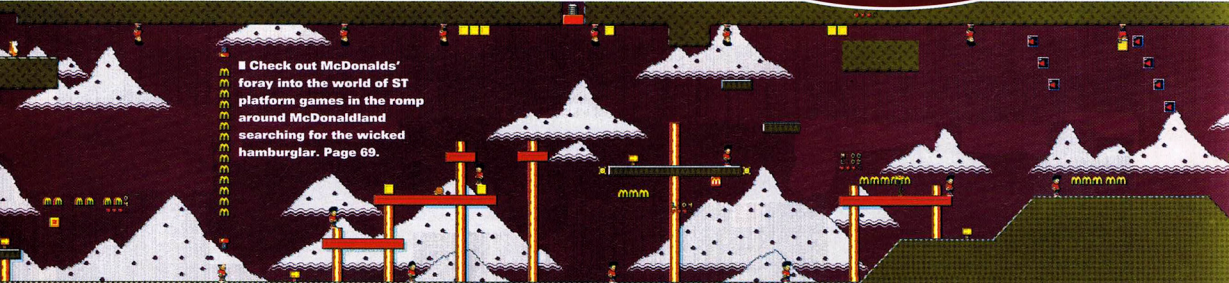


STF REVIEW POLICY

- It is *ST FORMAT* policy to only review completely finished games - that is, games you could actually buy in the shops, never incomplete or demo versions.
- We won't be rushed into reviewing unfinished games to beat our "competitors."
- We assume all games run on S20 STMs unless otherwise stated.

MCDONALDLAND

■ Check out McDonalds' foray into the world of ST platform games in the romp around McDonaldland searching for the wicked hamburglar. Page 69.

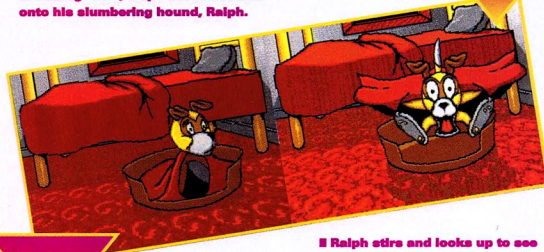




It's another balmy night in Kipsville, where only the sound of restful snores breaks the silence, even the usually restless Lee is sleeping soundly in his bed...



Or is he? Suddenly he sits up in bed, his eyes still firmly closed and, in his dreaming state, leaps out of bed and onto his slumbering hound, Ralph.



Ralph stirs and looks up to see what's going on. With a yelp, he realises his master is about to leap out of a carelessly opened window...



Too late. Lee leaps out of the window and onto the streets of Kipsville. Ralph leaps out after him and the game begins...



There's nothing like man's best friend

The media is littered with helpful canines, all trying their best to help their masters and not kick their privates in front of visitors. Here's our top five famous dogs

1 LASSIE

The doggy hero of thousands of TV re-runs, Lassie's been variously shot, clubbed and thrown out of car windows, but still she loves her human masters. What a mug.

2 SNOOPY DOO

Scooby turned cowardice into an art form by crying "Raggy Roo!" at the first hint of trouble. Heroic to the extreme, he managed to survive both Shaggy and Scrappy Doo.

3 SHEP

John Noakes and Shep were the best preseters Blue Peter ever had. They even had a catchphrase in "Get down, Shep," later immortalised on vinyl by popular beat combo, the Grumbleweeds.

4 SNOOPY

Proof positive that dogs are clever than their owners, Snoopy always manages to have the last laugh at the antics of good old Charlie Brown, Maisie and fleabag Linus.

5 GOOFY

Mickey's dopey sidekick who couldn't tell one end of a hammer from the other if you smacked him round the head with it. Only slightly eclipsed by the even more dopey Pluto.

If the gameplay proves too tricky for you, you can always try out Sleepwalker's excellent training level.



SLEEP

Ocean pull off a major feat this month with the release of this excellent charity platformer – this is bound to keep you awake

Everyone knows you should never wake someone who's in a sleep-induced trance, but what should you do if they're in mortal danger? That's the startlingly simple premise of *Sleepwalker*, the latest platform game from Ocean.

Sleepwalker revolves around the story of little Lee, the blonde-haired somnambulist of the title. Usually when he sleepwalks, Lee confines himself to his room, but one night his mother accidentally leaves his window open and Lee leaps out onto the dangerous streets of Kipsville. Luckily for Lee, you play his faithful canine sidekick, Ralph, and it's your job to get the dozy kid back to bed without waking him up. However, things aren't as simple as they seem...

Hush! Don't wake him up

As Lee trundles around Kipsville, arms outstretched like a night-shirted zombie, he encounters all

kinds of hazards – from abrasive nightclub bouncers to water-filled sewers, speeding cars to perilous rooftops. Each time Lee comes into contact with a hazard he wakes up a little and, if he sustains too much

Luckily for Lee, you play his faithful canine sidekick, Ralph, and it's your job to get the dozy kid back to bed

damage, he eventually loses a life. It's your job to prevent Lee from running into these obstacles either by clearing the way for him or by throwing yourself at the hazard and taking the flak instead. Ralph's a bit of a supercanine in the dog



■ Sleepwalker's map facility enables you to plan your game strategy and keep an eye on Lee.

WALKER



■ Get the right collectables on the bonus level and Ralph goes into a dream sequence.



■ If being squashed, eluded, drowned and run over isn't masochistic enough for you, Ralph can always get captured by Kipsville's astatic dog warden.

world and there's nothing you can do to him which is going to cause him any permanent damage – you can frazzle him on fires, get him into fights with various meanies, even get squashed flat by falling boulders – as long as Lee's safe and still asleep, that's all you need to worry about. To help you, Ralph's also been given extraordinary powers – he's brilliant at running, jumping, bridging gaps and he can even kick Lee out of danger. Ralph truly is a wonderdog.

Kipsville returns

The action takes place over six themed levels – Kipsville, the Zoo, the Graveyard, the Construction Yard, the Factory and Kipsville Returns. Each level has its own peculiar hazards associated with it – the Zoo is filled with water-squirting elephants and vicious snakes, for example, while the Factory is jam-packed with pretty mean, all-consuming furnaces.

You guide Lee around each level by pushing or kicking him

from platform to platform, while keeping him out of danger. Usually, there are safe places you can leave Lee while you check out the hazards further ahead. However, the only certainty you have is that if trouble is brewing, Lee can usually find it before you do.

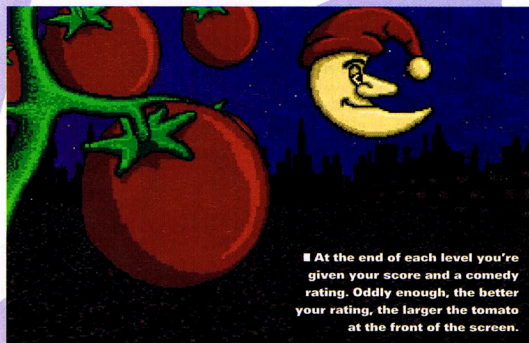
Fortunately, pressing <m> offers you an on-screen map facility. There are power-ups dotted around each level – see the Custard Pies and Whoopie Cushions box on the next page – which make life easier. You can also pick up five letters on each level which spell COMIC, this is useful for gaining access to the bonus levels where plenty more surprises lie in store.

■ Straight out of Monty Python, this. The foot bounces up and down alarmingly squashing everything that gets in its way.

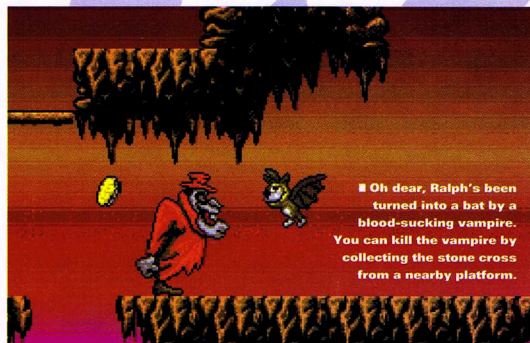


Doggie dreamland

If you manage to get to one of the bonus levels, Ralph is left to his own devices to collect heaps of power-ups and a whole bundle of odd puzzle icons. Every time you collect 20 red balloons, for instance, Lee is awarded with an extra attempt at getting home, while collecting the puzzle icons in a certain sequence entitles



■ At the end of each level you're given your score and a comedy rating. Oddly enough, the better your rating, the larger the tomato at the front of the screen.



■ Oh dear, Ralph's been turned into a bat by a blood-sucking vampire. You can kill the vampire by collecting the stone cross from a nearby platform.

CUSTARD PIES AND WHOOPIE CUSHIONS

Keeping Lee out of trouble is a full-time occupation for Ralph, the ever faithful hound. Luckily, the streets of Kipsville are positively littered with bonus objects to make his job just that little bit easier



CUSTARD PIE
Builds a bridge over water so Lee doesn't fall in and get wet.



DUNCE HAT
Collect this to fill out the map screen on the later levels.



FALSE BEARD
Gives you clues, via the map screen, about the secret blocks.



NOVELTY EAR MUFFS
Collected by Lee, these put him into a much deeper sleep.



RED NOSE
This rewards Lee with an extra attempt at completing the level.



WHOOPIE CUSHION
Gives temporary invulnerability to whoever collects it.

■ Ralph's a versatile old dog - he can run, jump and leap like no ordinary mutt ever could. Here he bridges a narrow gap to stop Lee from falling through.



you to see up to eight different animated sequences.

You see, the puzzle icons can be strung together to form one of Ralph's wicked dreams about his sleepwalking master. Collect a banana, a plus symbol, the Red-skins icon, a minus symbol and the letters R, E and D and you see Ralph place a banana skin in Lee's path for him to slip up on. There are over 75 different puzzle icons for you to piece together and it has your brain doing somersaults trying to work out what they all do.

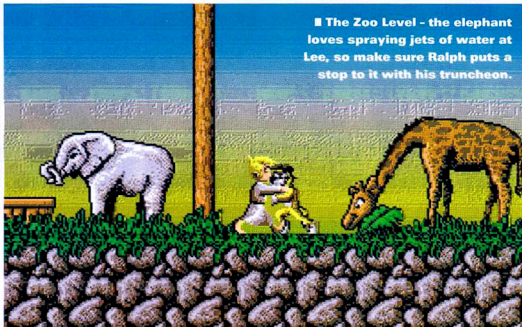
Ralph and Lee's adventures in Kipsville form the basis for one of the best platform games ever to be

seen on your ST. Gameplay is stunning with fast parallax-scrolling and well-animated sprites which are

Ralph and Lee's adventures in Kipsville form the basis for one of the best platform games

easily manoeuvrable thanks to the friendly joystick controls. *Sleepwalker's* filled with comic touches -

■ The Zoo Level - the elephant loves spraying jets of water at Lee, so make sure Ralph puts a stop to it with his truncheon.



■ One of *Sleepwalker's* many bonus levels - collect the puzzle icons in the right order and you're rewarded with a special animated sequence.

like Ralph's Wylie Coyote impersonation when he suddenly stops in mid-air - and is more like a Warner Bros cartoon than a hackneyed old platform game.

There are some excellent samples, including the voices of Lenny Henry and Harry Enfield and there are even some catchy tunes, almost unheard of in an ST game.

Sleepwalker successfully strikes a balance between the strategy, arcade action and puzzle elements making it a seamlessly enjoyable experience. Even at the easiest difficulty level, the game's fiendishly hard to beat and it takes ages to complete each level.

Verdict

Sleepwalker is one of the best ever platform games released for your ST. It's fast, funny, furious, original and incredibly frustrating with stunning graphics and gameplay.

Ocean have finally managed to come up with a game worthy of the hype and for once you don't

have to sit in a bath of cold baked beans to do something worthwhile for charity. If you haven't bought *Sleepwalker* yet, go and do it now.

ROB MEAD

Go on, it's for charity...

Every time Ocean sell a copy of *Sleepwalker*, £4.32 goes to Comic Relief to fund charity projects at home and overseas. Ocean hope to raise over £500,000 for the charity and it's not too late for you to take part. Even though the ST version arrived too late for Red Nose Day Four, you can still raise money for Comic Relief by getting people to sponsor you to play the game - there's a sponsorship form inside every game box.



■ Phew! Ralph saves Lee from an untimely end at the hands of a Reliant Robin.

Sleepwalker

£25.99, Ocean
061 832 6633
STEs with 1MByte of RAM only

Highs

■ *Sleepwalker* is wild, wicked, infuriating fun and it's for charadee.
■ The graphics are more like a cartoon than a platform game, the samples are excellent and the tunes are catchy. Incredible!

Lows

■ There are quite a lot of disk swaps.
■ Its association with Comic Relief has prematurely dated it.





CREATURES



Are you sick of platform games or are platform games just plain sick? Rob Mead takes a hatchet to the latest offering

Things have taken a turn for the worse on the planet Blot. Its inhabitants have suddenly woken up to the fact that being called a Blotian is incredibly unhip. They construct a spaceship, rename themselves the Fuzzy Wuzzies and crash land on a deserted island in the middle of the Pacific Ocean.

The Fuzzy Wuzzies are the cutesy stars of yet another platform game populated with goodies, baddies and machines that go "Grrrr." You see, the Fuzzies' island is also inhabited by a bunch of nasty Devils who capture the tragically hip creatures and cart them off to their gloomy sanctuary for a spot of animal experimentation. You play Clyde Radcliffe – the lovable hungover hero – who has to traipse across six perilous bad-die-packed levels looking for his missing pals.

As you make your way across every platform-saturated landscape you have to collect as many Magic Potion Creatures (MPCs) as you can. The MPCs come in useful later because you can trade them on the shop levels for eight special weapons – like the Curly Wurly, Scatterball and the Super Droopy – which make zapping alien nasties much easier. You also have a very special weapon of your own which you've made from a mixture of rot-

ting shish kebabs, diced carrots and cheap lager. It's your breath. In fact, your gob stinks so much it catches fire every time you open it. With these tools at your disposal, getting your pals back should be a cinch, but, of course, it isn't.

Long drawn-out deaths

The first thing you realise when you play *Creatures* is that it takes an inordinately long time to kill something. Even the nas-



■ One minute Clyde was skating round Streatham ice rink, the next he was up to his floppy ears in water.

ties at the start of the game take a few shots of your Drooper or dragon-breath before they disappear in a plume of smoke. What's worse is that some baddies are indestructible anyway and you lose plenty of lives trying to get past them. Why? Because Clyde rushes about with all the speed of a snail on his day off, while your opponents home in on you like cruise missiles. Even when you think you've got a chance of sneaking past, the gaps are usually so narrow you're lucky if you scrape through with your five lives intact. The other thing you notice is that to get from platform to platform your positioning has to be

■ Another beastie falls victim to Clyde Radcliffe's halitosis weapon in the funny, but flawed platform game *Creatures*.

frustratingly exact, even to the point where Clyde has to hang precariously in the air before you can make a move.

Creatures is controlled entirely by joystick with the usual twiddling to get Clyde to move left, right, up or down. You get to your special weapons by pulling down on the joystick while pressing the <Fire> button, just holding down <Fire> unleashes Clyde's stinky breath. Unfortunately, moving Clyde around isn't that easy as the controls are a bit vague.

Graphically, the game's packed with plenty of colourful, cutesy sprites, although the backgrounds are a bit samey and – because the whole thing's a hori-

zontally-scrolling affair – it can get a bit monotonous. The sound effects are also pretty ropey with your weapons sounding more like a malfunctioning tennis ball machine, than the tools of death they are. As for the music, well, it just sounds like an Erasure B-side to us.

Verdict

Creatures starts off promisingly enough, but ultimately fails to deliver. The colourful graphics and sick humour fail to disguise the fact that this is a very average platform game with appallingly slow gameplay. There's enough here to keep you going for a couple of hours, but *Creatures* has precious little long-term interest. **stf**



■ Clyde smiles encouragingly while you decide whether to carry on or go for a weekend in Swindon. It takes you 30 seconds to pack your bag.

Creatures

£25.99 Thalamus Europe
0494 474713

Highs

Creatures has some great graphics and a wonderfully sick sense of humour.

Lows

...but it's also incredibly slow and gameplay is frustratingly unforgiving.



Sick, sick, sick – rescue your fuzzy pals from the torture chambers



1

Dawdling again, eh? Thanks to you, Chip gets served as a tasty lunch for a mad chainsaw murderer.



2

...And Chaz finds himself strapped to a rather gruesome operating table. You'll have to be a bit faster next time.



3

Still, at least you managed to rescue Chuck, didn't you? Erm, didn't you? Oh dear. Chuck's just been shot!



GOOCH'S WORLD CLASS CRICKET

Warm beer, cucumber sandwiches and the smack of leather on willow. Rob Mead measures up with Gooch and the rest of the cricket world



Summer's here. All over the country, people are dousing their cricket bats in linseed oil, ironing creases in their whites and limbering up for another season of good-natured sportsmanship on the village green. Cricket has sadly been one area of sporting endeavour which has been neglected on your ST. Until now.

Quite why there are so few cricketing sims on the ST is something of a mystery. After all, it is a renowned international sport with a massive following, yet all we've been given is *Robin Smith's Cricket* and *D & H Games' Cricket Captain*, neither of which established this epitome of English sport as a force

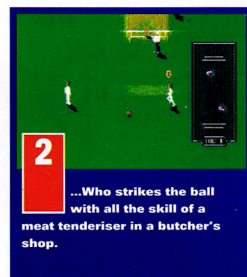


■ **Recreate the excitement of top-class world cricket with Graham Gooch's, erm, *World Class Cricket*.**

to challenge the likes of *Sensible Soccer* and *Kick Off 2*.

■ **Make up your own team**
Graham Gooch's *World Class Cricket* could be about to change all that.

Watch out for my googlies



MCDONALDLAND

Fast food makes you fat, spotty and buy games with the Hamburglar. Rob Mead puts on his paper hat and asks "do you want fries with that?"

Ronald McDonald – the friendly face of American cultural imperialism. From Tokyo to Moscow, the pale-faced geek in the orange fright wig beams down at you, imploring you to buy a McMuffin and a chocolate shake. Now Ronald and his cronies have invaded your ST with the latest licensed game from Virgin.

McDonaldland is a cutesy platform game for one or two players,

starring Mick and Mack, two street-wise kids in trainers and baseball caps who are prepared to do anything to get Ronald off the hook. You see, the Hamburglar has stolen Ronnie's precious Magic Bag and it's your job to find the nastiest spam sandwich in town, get the bag back and return McDonaldland to the cheesy all American paradise.

The action takes place over six different lands – Ronald's Club-

house, Birdie's Treehouse, Grimace's Highlands, Professor's Workshop, CosMc's Retreat and Hamburglar's Hideout. Within each land are six further sub-levels, accessed by a level map. In single-player mode you play Mick and have to leap around each screen collecting objects, avoiding obstacles and bopping baddies. The main objects you need are the Puzzle Cards to progress onto the next land and the Golden Arches, both modelled on McDonald's "M" logo. Both Mick and Mack have special abilities like the ability to dig, jump and throw and you're also given four lives and three continues to help you.

Irritation abounds

The first thing you notice is that Mick and Mack seem to have a life



■ **Ronald's cosy homelife is shattered when his Magic Bag is stolen by the evil Hamburglar in Virgin's latest licence, *McDonaldland*.**

of their own – the joystick controls aren't very responsive and you either end up doing something too late or not at all. The characters also have an annoying habit of sliding about all over the place, even if you only nudge the stick once. This gets incredibly aggravating after a while as you fail to make vital progress through the game. The graphics also grate – you expect to



It bypasses the pastoral idyll of the village green and plumps for some hard-nosed international competition instead. You can choose from ten test-playing sides including England, Australia and the West Indies, each with a full complement of 20 famous cricketing stars. If that's not enough to get you batting on your ST, you can always invent a few teams of your own.

There's also a whole set of match options for you to choose from. Games can take place over one to five days and you can choose to play from as few as 20 overs per innings to more than 90. You can also choose the number of innings you want each team to

have. Matches can be played against your ST, a pal or you can even let your ST play against itself.

Just like on TV!

Once you've set up your team, gameplay can begin in earnest. The action takes place from a slightly above-and-behind view of the wicket from the bowler's end, like you get on the TV coverage of test matches. This gives you a good perspective on the unfolding events and makes controlling both batsmen and bowlers a cinch.

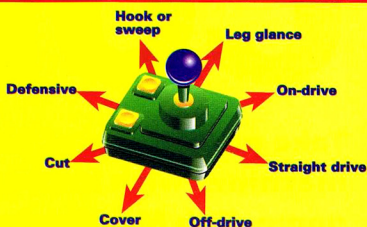
If you're batting you have a few seconds to position the batsmen in front of the stumps before the bowler begins his run up. You must then play a stroke appropriate to the bowler's over – get it wrong and you could end up being caught first ball, get it right and you could score four, or even six.

Bowling is equally straightforward – you position the small white square in front of the wicket, then unleash a googly on the opposing batsmen.

The whole game is controlled with a combination of joystick and mouse movements. The mouse is best for accessing the different menus, while the joystick is used for both batting manoeuvres and a spot of manic waggling when it comes to bowling and making runs.

BATTING DOWN THE CREASES

Keep the Aussies at bay with these wicked moves – swap left and right moves for left-handed batsmen



The graphics and sprites are extremely realistic, with smooth animations which accurately capture the movements of real cricketers. The sound effects also help to promote the realism of the game with some excellent sound samples of crowd noises and the sound of bat striking ball.

Verdict

Graham Gooch's World Class Cricket is an excellent sports sim with some great gameplay and sexy graphics. The inclusion of a two-player option means you can have great fun taking on other cricketing buffs in your family when England are seconds away from victory and rain stops play yet again. **stf**

Gooch's World Class Cricket

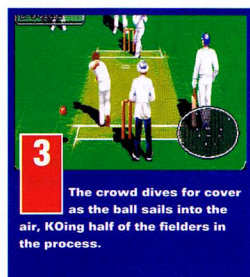
£29.99 Audlogenic
081 4242244
1MByte required

Highs

Realistic animation, customisable teams and waggling action makes this a winner.

Lows

You're given little info about the players. An editable statistics screen would have been a good idea.



3 The crowd dives for cover as the ball sails into the air, KO'ing half of the fielders in the process.

A SIDE ORDER OF COLLECTABLES TO GO

When you've had your fill of fries and apple pies it's time to go out and get some juicy objects to help Mick and Mack around McDonaldland



1-UP
Collect this and you get an extra life.



BLOCK
You can pick these up and lob them at Ham-burglar's cronies to knock them out.



BOAT
Useful for getting around the watery bits and avoiding nasties like those hamburger-eating piranhas.



GOLDEN ARCHES
Collect 100 of these and you're rewarded with a bonus level where you can win more 1-Ups.



PUZZLE CARDS
You have to collect these in each land

before you can move onto the next. Collect them all and you're rewarded with a bonus.



SPECIAL BLOCK
Throw or place these in the Special Block Outline to obtain a different route through a level.



SPECIAL BLOCK
Not really a collectable, you just have to place a Special Block here to use it.



McDonaldland

£25.99, Virgin
081 9602255

Highs

The two-player option is best and, if you're a mental age of ten or under, you might find it curiously entertaining.

Lows

Cheesily American in an apple-pie-and-mom kind of way, the game-play, leaves a lot to be desired, too.



get cutesy kiddie graphics in platform games, but *McDonaldland* looks and plays like something written five years ago. The animation's awful too and the characters also have an alarming tendency to walk off platforms and then just hang there in mid-air. The in-game chip music is also irritating – it's a bit

like hearing a tone-deaf robot sing the Birdie Song at a 24-hour karaoke. Thankfully, you're given the option to switch the tuneless bleeps off at the start.

Verdict

Oh dear, oh dear. *McDonaldland's* a pretty awful concept to start with

and it's sadly let down by inferior graphics and lousy gameplay. It's hard to believe that either Virgin or McDonald's actually want to be associated with this game. Despite all these criticisms, *McDonaldland* is actually quite addictive and your kid brother is going to love it even if you don't. **stf**





COHORT 2

Take part in one of history's most efficient war machines with Impressions' latest combat game. Rob Mead gets in his chariot and gallops off into the sunset

What have the Romans ever given us, eh? OK, apart from roads, a sewerage system, law, order and Pavarotti. Well, they also gave us the legend of the Caesars and one of the most powerful armed forces the world has ever seen. Now it's your chance to relive the might of the Roman legions, thanks to Impressions' new war game simulation, *Cohort 2*.

Cohort 2 goes over the same familiar territory explored in its predecessor, *Cohort*. The game takes place during a 400 year period – 200BC to 200AD – when Rome's powers were at their peak. You play the Blue Army and can choose to be either a Roman or Barbarian force. You can also choose to make your opponents – the Red Army – Roman or Barbarian as well.

At the start of play you're presented with a series of menus which enables you to choose your battle group's attributes and the kind of terrain they're going to fight over. Your battle group is divided into a series of different units – light to heavy infantry, light to heavy cavalry and archers.

Each unit has very distinct characteristics associated with it. For example, the light cavalry is ideal for "hit and run" charges against enemy positions, but is less able to cope with sustained hand-

■ The battle begins to get a little heated in Impressions' involving war-game *Cohort 2*.



to-hand combat with a heavily-armoured enemy. Similarly, the archers are good for arm's-length attacks on your opponents, but are practically useless at close quarters. A heavy infantry unit, meanwhile, is great for sustained assaults, but is easily outpaced and over-run by enemy cavalry.

The lie of the land

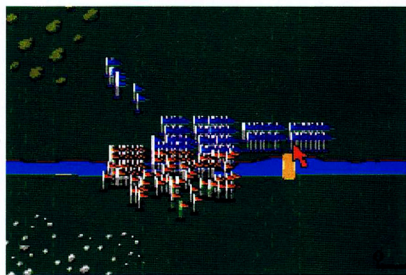
The effectiveness of any fighting force is directly correlated to the terrain it is placed on and *Cohort 2* enables you to choose from eight different terrain types – open field, bridge, cliff, hill, marsh, downs, undergrowth and forest. Obviously an open field enables you to use your forces to their best advantage, but makes them vulnerable to attack from enemy cavalry charges and incoming arrows from archers. Other types of terrain like the forest means it's virtually impossible for certain unit formations to

advance without splitting up into smaller groups which are easily picked off by your opponents. All in all, *Cohort 2* contains up to 19 different scenarios with a variety of troop units and terrain, or you can create your own using the simple point-and-click menu system.

Battle stations

Once you've chosen the scenario you want to play, things start to get a little more complicated. Your forces are

■ The overhead view map. From here you can examine the whole battlefield and check on your enemy's positions.



placed in formation on an overview map which enables you to see both friendly and enemy positions. To view the opposing forces in more detail, simply click the left mouse button to zoom in on a particular unit – this has the advantage of enabling you to decide which of your units is going to attack a particular section of the enemy's forces, given the relative strengths and weaknesses of each.

You can now select one of your units or groups to wade in and start separating heads from necks with all the aplomb of a footy hooligan on an away day to Millwall. The actual battle is viewed in 2D perspective with your troops charging the bad guys and generally waving their swords and arrows around a lot. You move to different battlefield locations via



Manoeuvring your troops around couldn't be easier thanks to *Cohort 2*'s point-and-click menu system. Here's our indispensable guide to what all those icons mean

- 1 Disk access**
Click here to save and load different game scenarios. You can also abandon a battle if you wish.
- 2 Individual/group mode**
Click here to toggle between

to give orders to an entire group.

- 3 Quick mode**
Puts a battle into fast-forward mode, with only details of battle casualties being fed through to you.

- 4 Unit selection window**
The currently selected unit appears in this window.
Click on the Up and Down arrows on the menu bar to view each unit, and then just click on the Unit Window if you want to gain access to the Unit Command Panel.

- 5 Map screen**
Click here in order to see an overview of the battle map – it does help if you know where you are.

CHARIOTS OF FIRE

different troop command modes – a single soldier means you're in control of a single unit, while a row of troops enables you



STOP THE CAVALRY

With loads of different troops to choose from, things can get a little confusing on the battlefield – see if you can guess why



MEDIUM INFANTRY
Foot soldiers protected only by light armour covering only part of their bodies.



HEAVY INFANTRY
Armoured foot soldiers are the strongest, but the least manoeuvrable.



LIGHT INFANTRY
Soldiers armed only with slings and without body armour.



ARCHERS
Light infantry armed with bows instead of slings. They don't appear to have any feet either.



LIGHT CAVALRY
The fastest troops on the battlefield with little protection for either them or their horses.



MEDIUM CAVALRY
Troops who wear light armour and ride on armoured horses. Make very deep hoofprints if you're on muddy ground



HEAVY CAVALRY
Fully-armoured troops with armoured horses. Tough to beat.



Trying to sort out what's happening to your troops can get a little confusing as the baddies wade into friendly territory.

the keyboard, and select a different unit by either clicking on it in the battlefield or overview map or by clicking on the Unit Selection window contained in the menu bar at the bottom of the screen – see the Chariots of Fire box on the opposite page for more details.

Run away, run away

The big problem with *Cohort 2* is the same problem suffered by its predecessor. Once you've picked your troops, done a spot of battle and strategy planning and unleashed your forces on the barbarian hordes, there's actually very little for you to do. OK, so you have to keep your casualties under check and move your units around occasionally, but apart from that it's time to sit back and let your ST sort it all out for you.

Sadly, you can't even marvel at the glorious graphics because

the backdrops are dark and uninspiring while the sprites move around in that jerky, slow-motion style usually associated with hiccupping tortoises.

The click-and-point controls are also quite unresponsive and it usually takes a couple of attempts at selecting something before your ST realises what you're trying to do. The sound effects are little better, mainly consisting of samples of galloping nebbies and clashing steel – there are no shrieks or blood-curdling screams, so the game comes across as evocative rather than atmospheric.

Despite these shortcomings, *Cohort 2* is actually quite involving. You do really start to care how your forces are getting on and it can be pretty hard to swallow the bitter pill of defeat – remember history is written by the victorious, not the vanquished.

I CAME, I SAW, I CONQUERED

Cohort 2 can be linked up to Impression's Roman god game *Caesar* which scored 85% when it was released last year



The battle goes well and the enemy is weakening.

Link up Impression's great god sim, *Caesar* with *Cohort 2* to enhance your battles.

If you've got a copy of Impression's Roman god game *Caesar* you can hook it up with *Cohort 2* and enjoy extended battle sequences during gameplay – bump into a horde of marauding barbarians in *Caesar* and you're asked if you want either a quick or extended battle.

Choose the second and you can enter into a *Cohort 2* sub-game where the confrontation is played out in its entirety. This means you have a lot more control over the outcome of battles with your adversaries.

Verdict

Cohort 2 is an involving, but complicated war game which is unfortunately let down by its graphics and control mechanism.

The basic premise is sound, with plenty of battle planning and

strategy if you're to have any chance of success, but the graphics are so murky it's difficult to see what's going on the melee is underway, and the tricky controls make getting around the battlefield a real pain. **stf**



The Army Selection menu enables you to choose your own group formation or opt for one at random.

6 Statistics window

Click here and a statistics box appears which contains information on your troops' status, including numbers of units defeated and total casualties. You're likely to find this incredibly pleasing or majorly depressing.

7 Battle mode

Click here when you've issued your commands to recommence the battle.



Cohort 2

£29.99 Impressions
071 3512133

Highs

Cohort 2 is an involving war game with a good combination of strategy and action.

Lows

The animation during the battle sequences is jerky and a little slow.





■ Bounce from cloud to cloud, rock to rock and house to house in your quest to retrieve the crystal goodies from the temple.

CRYSTAL KINGDOM DIZZY



■ *Crystal Kingdom Dizzy* is another in the series of jump, talk, find and give egggy adventures. Delightful for anyone under 10 who believes that eggs can walk.

Dizzy the wonder-egg is back to help out the Yolkfolk villagers. Paula Richards sees how he's managing his latest adventure

How do you like your eggs? Poached? Scrambled? Fried? Sunny side up? Or in your ST games? That's good then, 'cos Dizzy's back in another of his amazing bouncy egggy adventures.

This time the temple in the Crystal Kingdom has been robbed of its crystal goodies – and this means that terrible strange things will happen to the Yolkfolk, so you, as Dizzy, have to find the treasures and return them to the temple. If this all seems a bit far-fetched, er,

well it is, you just have to live with it in the same way that you have to live with the fact that Dizzy's an egg but he bounces (though he can't swim), he talks (though he always says the same thing to the same people) and he has arms and legs (though no other apparent bodily parts).

Puzzles galore

Crystal Kingdom Dizzy is set over four levels through which you have to explore as thoroughly as you can

using your keyboard or a joystick, getting to know all the people (and eggs) who live there, as well as the lie of the land. You can pick up bonus points and extra lives for a bit of extra fun, but that's basically it. Your final aim is to get the treasure but you do have plenty of puzzles to sort out along your travels, each of which is inter-linked. For example, in the first place you've got to get the electricity working so that Dora can bake a cake so that you can properly feed CJ so that he

gives you his umbrella to hold so that you can cross the waterfall without getting wet. Phew! You need a logical turn of mind to solve these although there are really so few options you're bound to hit the right one sooner or later.

Verdict

Terrible egg puns aside, there's not actually very much mileage to get out of *Crystal Kingdom Dizzy*. Once you've worked out who wants what – and that's not difficult since you'd have to be pretty dense not to be able to perceive that "I've lost my screwdriver" means you should look for said screwdriver.

It's a good game in which to practice your joystick control – and temper control as you hurl yourself into the water yet again – and it's not exactly unpleasant to look at. But for £20 you want something that's going to stretch the brain cells and titillate your eyes and ears a little more. **stf**

MEET THE YOLKFOLK

On your travels you get to meet plenty of the other inhabitants of Yolkfolk village – some are egggy and some are not...



Daisy – her interests include playing computer games, shouting at poor Dizzy and, er, whips.



Denzil – the handyegg around Yolkfolk village, the only problem is that he tends to lose his tools and Dizzy has to find them for him.



They say you can't get something for nothing and the Genie of the Well is a strong believer in this – give him diamonds and he'll grant your wishes, but otherwise, you have no chance.

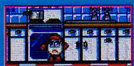


CJ the elephant – Codemasters miss no opportunity to plug CJ's latest game. Give any food you come across to CJ if you want him to help you.



Grand Dizzy – got an

egg ache and is very bad tempered. Although he looks like he's asleep, he's more likely to jump up the second you're out of the room.



Dora – a homely sort of egg but all her domesticity is put into a dreadful scramble without any eleggtricity whatsoever.



This is your ghost, this is – if you're crap at making Dizzy jump from all those clouds and rocks, dead is a state you're frequently likely to find yourself in.

Crystal Kingdom Dizzy

£19.99 Codemasters
0926 814132

Highs

Bright and cheerful with plenty of puzzles.

Lows

Not incredibly intellectually stimulating; can get frustrating.

63%
RECOMMENDED
BY

CRYSTALS OF ARBOREA



■ Clicking on the player's names and then on Move sends them off to wander the green pastures of Arborea, leaving Prince Jarel feeling particularly lonely.

Your world has been infected with evil. Morgoth, who's not particularly nice, has been putting himself about a bit too much for the liking of the Gods. In their anger, they let loose a flood and drowned all but one of the surrounding lands and kept dinghy salesmen in business forever.

This land is Arborea, the home of the four sacred crystals of harmony. As you'd expect, Morgoth has gone and stolen the crystals and it is your task to get them back. To help you in your quest you have six characters led by the well 'ard Prince Jarel. They all start off dead which isn't very useful, so

before you begin you must rejuvenate them, choose their character class and deal out 60 points to the four attributes of life, constitution, strength and agility.

Click on the 3D icon and you're thrown into the world of Arborea as seen through the eyes of Prince Jarel. The other characters can either follow him or go off exploring on their own – you can do this by moving them on a separate map. It's best to send some characters off on their own as they often find something useful on their travels.

There's a lot of skirting around to be done in the game and those crystals can prove pretty elu-

sive. Luckily, you can stumble across a house and if the inhabitants are hospitable then they bestow you with new skills or reveal the location of a crystal.

In true RPG fashion you soon find yourself thrown into an argument with a motley collection of creatures, this usually ends in a bust-up. The fighting takes place on a chessboard style grid. It's advisable to pile in with the fighters and keep the magicians out of the way so they can cast spells. There is also a flee option in battle which is handy when things start getting a little too hot.

Verdict

Wandering around the 3D landscapes creates a genuine sense of



■ "Thank you for your help in our quest, O wise one. Er, and can we have our ball back please?"

atmosphere although they do get a little repetitive and movement can slow down in this mode. On the other hand, the unique combat sequence is fast, simple and effective. Tripping over those attractive looking houses in the forests breaks up the monotony of wandering around looking for crystals and livens the game up a bit.

Crystals of Arborea is a good game – if you're looking for a definitive RPG and are willing to splash out, try *Ishar*, if not, you could do a lot worse than this.

GRANT RENCOURT

Crystals of Arborea

£9.99 Daze
071 3282762

Highs

Strategic role playing game with effective combat sequences and impressive graphics.

Lows

Sparse sound. The disk accessing slows the whole thing down.

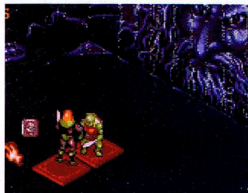


HERO QUEST

There are lots of good role playing budget games around these days and not a lot to differentiate them. *Hero Quest* stands out 'cos of its detailed graphics and a wicked multi-player option.

Converted from a best-selling board game, *Hero Quest* gives you and three of your mates the chance to become a dwarf, barbarian, wizard and elf wandering around a dungeon in a series of 14 quests. Each character has different attributes – the dwarf and barbarian do all the rough stuff while the wizard and elf are much better at spell-casting.

You move around in the game by spinning a coin, which,



■ "See that flagstone, that's mine that is. Give it back."

when stopped, determines the amount of moves you can make. After your move, you can perform one other action, like fighting or searching for treasures or hidden doors. Combat involves rolling up to three die – the number of die thrown depends on the characters involved – and trying to overcome your opponent's defence. You can also cast spells by selecting which one to use and who to use it on. While you concentrate on carrying out the special task you've been assigned, it's a good idea to pick up potions and extra gold to help you.

As you complete the tasks you get more money that you can spend on nifty equipment which sets you up for the next outing. As you pick up more and more dosh, your appetite for monster-bashing increases proportionally.

The characters move around the dungeons in a slightly stilted fashion, but this is a small grumble. In trying to recreate the genuine board game atmosphere, potential animation sequences have been sacrificed in favour of short text descriptions – for example, you are

■ Most of the action takes place here. Not all of the rooms are littered with society's outcasts.



simply told when a huge stone block falls on your head.

Verdict

If you feel like taking the plunge and exercising some naked aggression, you can't go far wrong with *Hero Quest*. The game works because it is simple in concept and

in its execution, instantly playable and addictive. Great if you want to discover the joys of multi-player RPGs.

GRANT RENCOURT

HeroQuest

£9.99 GBH
0742 753423

Highs

Very detailed graphics, easy control system and absorbing game-play all add up to a hit board game conversion.

Lows

Scenarios can get repetitive. An annoying sound-track detracts from the atmosphere.



■ Don't forget to stock up on those essential items – armour, weapons, incontinence pants...

Still stuck on Level Ten of the Hallitosis Dwarf? Need a cheat for Edward the Puss Doctor? Then you've come to the right place. Rob Mead has all the answers and he's not going to let you forget it



STREET FIGHTER 2 US GOLD

The mailbag has been full of tips and cheats for this **FORMAT GOLD** rated beat-'em-up. Benjamin Boucher-Giles of Burton-on-Trent has been playing the game for the last two months and completed it with four of the eight fighters.

Now you can do the same thanks to Ben's complete solution and an in-game poke

Poke

Place the cursor over Blanka on the character selection screen and type in **PATIENCE**. Now select your player. <F10> now tops up your energy, although you can't see the end-of-game sequence.

Player selection

If you're new to the game choose **E Honda** or **Blanka** – they are both very easy to use and have devastating effects. If you consider yourself to be more advanced choose **Guile**, **Dhalsim** or **Chun Li**. Experts should try mastering **Ryu**, **Ken** or **Zangief** – all completely devastating.



Ryu or Ken

FIREBALL – pull down, then slowly roll the joystick forward towards the opponent until you reach **Right** or **Left**, then press <Fire>. **HURRICANE KICK** – same as **Fireball**, but roll away. **DRAGON PUNCH** – pull down for two seconds, then <Fire> and Up together. Use **Ken's** barrel roll (<Fire> and



■ **Oops.** Moves like this make **Bison** a hard opponent to beat.

Down) when he's next to an opponent – it's very energy zapping.



Chun Li

LIGHTNING KICK – tap the <Fire> button three or four times very quickly.

WINDMILL KICK – equivalent to the hurricane kick. Pull Down for two seconds, then <Fire> and Up.



Zangief

SPINNING CLOTHESLINE – tap the <Fire> button three or four times very quickly.

SPINNING PILE DRIVER – this needs a lot of practice. Diagonal Down, Down, Diagonal Down (other way) and <Fire>.



Dhalsim

FIREBALL – see **Ken** or **Ryu's** fireball.

FLAME – don't use this.



E Honda or Blanka

HEADBUTT/BARREL ROLL – pull Left for two seconds, then **Right** and <Fire>.

HUNDRED-HAND SLAP/ELECTRIC – tap the <Fire> button three or four times very quickly.

Use **Honda's** bearhug or **Blanka's** face bite often during close attacks.



Guile

Sonic boom – pull Left for two seconds, then **Right** and <Fire>. **Flash kick** – pull Down on your joystick for two seconds, then pull Up and <Fire>.

■ **How's this for a blind date?** Sparks fly as **Blanka** gets hot and bothered over **Chun Li**.



ARKANOID 2

HIT SQUAD

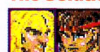
On the title screen type **MAGENTA** and press <S> during the game to skip levels.

CAPTAIN PLANET AND THE PLANETEERS

MINDSCAPE

Type your name in as **CAAA** to achieve infinite lives in this attempt at a green game.

The Solution



Vs Ken or Ryu

Immediately – if your player can – unleash a fireball and then go into a crouch position. If you're **Ryu** or if **Ken** advances towards you, use either a jab or medium sweep to keep him at bay. If he crouches beside you, use a medium sweep.

Eventually your opponent tries an air attack – counter-attack this with a dragon punch or strong uppercut. If he becomes dizzy, you should throw or hurricane kick him and repeat.



Vs Zangief or E Honda

Keep well away – both **Zangief's** and **Honda's** close moves are devastating. Stay in the centre of the screen and kick. If **Zangief** tries an air attack, try a strong uppercut. If he goes for a hundred-hand slap or a spinning clothesline, just wait until it's nearly over, then fireball him. If you can't, stand back, jump and do a strong punch. When **E Honda** is low on energy he headbutts you – be ready to fireball him.



Vs Blanka

Make for the left corner and unleash a few fireballs. Uppercut when he jumps towards you. Don't take to the air too much because **Blanka's** best place is in the air. If he electrifies, fireball him.



Vs Guile

Possibly the most difficult on **Level Seven**. Crouch and use the strong sweep to keep him back. When he jumps, uppercut or dragon punch him. If he sonic booms you, either come in with a medium flying punch or return three or four fireballs.



Vs Chun Li

Make for the left hand corner and fireball her. Wait till she jumps then uppercut, then hurricane kick or strong kick. When she gets dizzy, hurricane kick.

CHUCK ROCK

CORE DESIGN

Press <Caps Lock> on title screen, then type one of the following for a different effect:

ESTRANO: Flying mode.

MORTIMER: Zone select.

TURN FRAME: Level Select.

SHE LOVES CLEANING WINDOWS: Infinite energy.

DOUBLE DRAGON 3

VIRGIN

At the end-of-level fight in China

keep jumping and kicking right until you reach the wall. This causes you to rebound off the wall with effective results. This also works on later levels and is particularly useful against most fighters in Japan.

DRAGON'S LAIR 3: THE CURSE OF MORDEAD

READYSOFT

Type TIME on the intro screen to watch the whole game flash past.



■ With Mordread vanquished, it's time for Daphne and Dirk to get down to the business in hand.

DYNABLASTER

UBI SOFT

Here are some more level codes for this excellent game from Nicholas Bennett of Renfrewshire.

LEVEL	CODE
1.7	UKFZJTVG
2.4	UKCZSBVV
2.8	UKCZSGVL
3.1	UKZZHWST
3.8	UKCHPGVH
4.5	UKZHNMTU
5.4	RWHNJTVG
5.7	UUVJVJTA
7.1	UKGZMIUT
7.8	UKGZHIUH
8.4	RACZPDPN

FLOOD

ELECTRONIC ARTS

Enter the password as SOAP to play any level in the game.

INSECTROID

STF COVER DISK 44

Jonathan Newell of Shrewsbury has sent in these boss codes which work on adult and child settings.

Level 10	WASPAROID
Level 20	CRABAROID
Level 30	STOMPROID
Level 40	OCTODROID
Level 50	MANTAROID
Level 60	MASTEROID

Vs Dhalsim

Immediately take to the air and perform a strong punch. Once you've landed, throw him and do it all again. When he gets dizzy, you can hurricane kick or fireball him.

■ Dhalsim likes to fireball his opponents, so get in punches and kicks.



Vs Balrog

Stay on the floor and use jab sweeps. You shouldn't really stand until he is dizzy. If you're cornered use a defensive jump followed by a kick.

Vs Vega

Keep crouching. Use medium punch or jab to keep him at bay. When he climbs the fence, keep out of the way – stay to one side and then jump with a kick.



Vs Sagat

Head for the left corner and then perform a defensive jump followed by a kick. If he uses the Tiger uppercut, you can just fireball him.



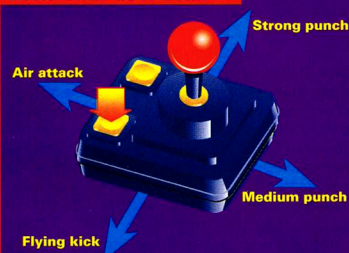
Vs M Bison

Argh! Start by blocking solidly and when he jumps, uppercut or dragon punch him, followed by a fireball. He takes a lot of practice, but is not impossible. If he becomes dizzy or stays still, hurricane kick him. Doing all this is vital.

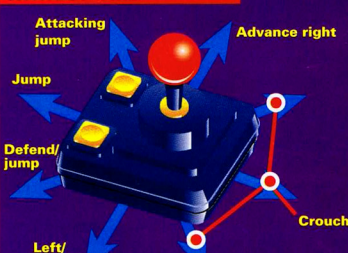
Special moves

Don't believe the manual - a lot of it's rubbish. Here's how to really do those moves

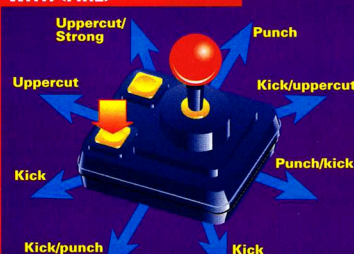
WITH <FIRE> IN THE AIR



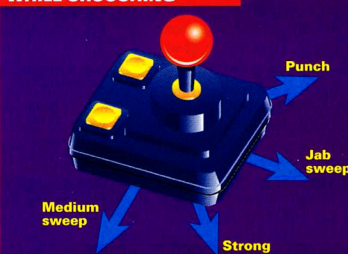
WITHOUT <FIRE>



WITH <FIRE>



WHILE CROUCHING



■ A few level codes and you could be blasting insects into outer space.

INTERPHASE

MIRRORSOFT

Type in the word FENNY while the game is paused to achieve infinite lives and happiness ever after.

LOTUS TURBO CHALLENGE 2

GREMLIN

Enter the password as TURPENTINE or DEESIDE and then you can live forever – or until your bones break, at least.

NARC

OCEAN

Shoot the very first dustbin you come across on the first level until it turns blue (strange dustbin, that). Walk into the bin to get infinite lives.

PANG

OCEAN

Type in the words WHAT A NICE CHEAT on the map screen so you don't die prematurely.

■ "Je veux vivre! I want to live!" "Well, stop waving that gun around, then."

RICK DANGEROUS 2

MICROPROSE

Type JE VEUX VIVRE instead of your name anywhere on the high score table. Your wish should then be granted.

ROLLING RONNY

VIRGIN

Press the <F9> key during the game to get some more money.



SHADOW OF THE BEAST

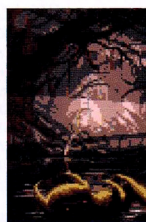
PSYGNOSIS

Press <F5>, <Return>, then <F5> again to gain extra lives.

SHADOW OF THE BEAST 2

PSYGNOSIS

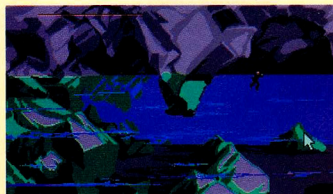
Hold down the left <Shift> key, <Enter> and <O> on the numeric keypad, then just press the



OPERATION STEALTH US GOLD

Here's your chance to get your hands on Matthew Wilkinson's solution. Watch out for Part Two in next month's STF

Go to the newspaper stand. Examine the return coin slot. Use coin in coin slot. Move to the toilet room.



Operate briefcase. Take pen, take US passport, operate calculator, take new passport. Operate up arrow 'til correct passport appears. Use passport on opening. Press red button. Operate briefcase.

Go to passport control officer, use passport on him. Go to welcome hostess, speak to her and examine telegram. Move left, go to guard, use airline ticket on guard. Move to first baggage carousel, examine baggage which says Mr Martinez, take baggage, operate baggage.

■ Check out this month's Classic Solution, Operation Stealth.

Go to bathroom, operate razor, use electric socket. Go to passport officer, use original passport on him. Go left, get in taxi. Examine US passport, take bunch of notes, go to bank, use notes on clerk. Use coins on florist, take red carnation, use it on John. Go to park, sit on bench. Move quickly to the right and go to bank, use card and key on bank clerk, go down and enter vault, use key on safe (bottom right). Operate ground, use ropes on ground. Operate ground and examine wall where breeze is coming from. Operate pickaxe three times on the wall. Swim under and over the rocks,

and watch the oxygen level at the top. When you've finished this you come out at the florist. Walk to the beach and talk to the man. Use coins on man. Go to the hotel, press button and go to Level Two, and walk to Floor Three. Go to the last door and operate it. You meet Julia and Otto (your double agent).

They kidnap you and put you on a boat. At the very first sentence, operate the bracelet. When they throw you off the boat and you reach the sea bed, operate the bracelet again. Swim over to Julia and operate her. On the surface, one of Julia's friends picks you up and takes you to their hideout.

ISHAR: LEGEND OF THE FORTRESS DAZE

Episode 2: Paté Pig has been transformed into an alluring beauty by the evil lord Krogh. Consumed by a passion for men in sackcloth, Paté goes to St Augustine's and finds herself locked in a passionate embrace with Cuthbert the head monk. Welcome to Part Two of our complete Ishar solution by Andrew Keyworth of Hedon, North Humberside

Deloria the delectable

Travel east from the city of Valathar until you reach a forest, then go south along its edge where you meet a merchant who has something useful to sell to you. Return east into the forest and you meet a pig. Do not kill it, instead mix an Arbool potion in the phial you got from Rhudghast dungeon to turn the pig into a useful team member, Vorgula the witch.

Go to the village of Halindor and visit the house of Irvan. He tells you that his daughter, Deloria, has been kidnapped and has been taken to Elwingl. If you can rescue



Deloria and return her back to Irvan, he rewards you with a key. You find Deloria in the town square, but you have to lose a team member to ensure she comes with you. One of your characters falls in love with her and does not follow you. The only solution to this problem is to make an anti-love potion and give it to him.

Another person you must find in Elwingl is Thorm who gives you monk robes so you can disguise your team. Go west and take the teleport, making sure you look out for the Wizard. When you reach the dungeon of Valathar make sure you search everywhere because there are many things to find inside. There are various passages that open thanks to levers and spe-

■ Rod, Jane and Fred were at a loss after Rainbow finished, so they dressed up as Rottweilers and terrorised kids with their harmonies.

cial keys you find inside. When you reach the special locked door, use the key you picked up at Irvan's house to open it. Now carry on until you

find a crossroad. Go north and continue until you end up at the House of the Living Dead. There are many rooms to explore, but you must find a key and take it. Now carry on until you reach the east crossroads. Turn south and you find the Dark Knight before continuing. You also find a key. Return to the Dark Knight's room and exit through the door facing towards the east labyrinth.

Continue until you find the exit and turn north. Keep going and pull the lever to open the corridor. Now collect the key and go back to the previous crossing.

The gas chamber

Continue south and then carry on to the east. Follow the wide corridor until you reach a cul-de-sac. Take the key and go back to the Dark Knight's room. Head north until you reach a wall, then unlock the door to the east. Continue east until you reach a labyrinth which consists mainly of two parallel corridors with doors operated by various levers.

Take the southern passage and then move east. Ignore the lever and enter on the left. Operate this lever and return east. Turn right and then left, pulling the lever on the half-turn. Now go back to the previ-



■ "Oi, fatty! Your mother's got a face like a baboon's backside." "I wouldn't antagonise him if I were you. He had 45 tins of beans for his tea."



■ There's some interesting creatures lurking in the undergrowth.

TORVAK THE WARRIOR

CORE DESIGN

Type CHEAT into the high score table, followed by as many full stops as possible. Then hold down <Fire> in game and press <1> to <5> to skip levels.

WIZKID

OCEAN

Do you need more money when you're playing this fantastic game? Then you need to check out this tip

<F5> key to increase your energy to 30 units.

Going through five levels of mazes is easy – just get the key and go back to the stairs. Operate the door and go into the office, over to the statue and operate the statue's arm. A safe appears. Use the little box on the safe door. Turn the box on. Operate the up and down arrow until the first light on the box comes on (if two lights come on it's a two figure combination), then press the lock combination button. This moves it to the second figure. Repeat for the other digits.

Press the lock combination button until the line under digits goes off the screen, turn the box off, then remove little box. Press

the lock combination again to reveal the secret envelope. Run after the man in the white coat and follow him on a jet ski avoiding the sharks, and secondly avoiding Otto's men.

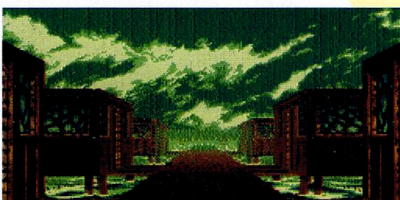
Go to the seaweed screen and look for an elastic band. Go right until you reach the last screen and examine the palm tree. Operate it, work button, go to the entrance and open it. You're in a cage about to be eaten by a goldfish. Use pen on lock then use watch on the right and left walls. Go to the grille until the rope tightens, operate grille. Then it's five levels of mazes that you have to get through...



■ Operation Stealth: goldfish, passport officers and... what? Red carnations? No wonder you're stuck.

ous room – west – and turn right and left again. Pull the lever and leave the maze by continuing along the passage towards the east. Turn right when you reach the end and then left. You're now in another maze, populated by blue creatures. Go south until you find a key and then carry on to the teleport. As you head south, turn east almost immediately. Turn left and you arrive at a room with a lever. Before you pull the lever make sure all your team drink the Wordage potions. Pull the lever. Gas bursts into the room. Follow and examine the corridor until you enter a chamber, pull the lever and the gas disappears. The room has two accesses. Go east until you find some skeletons and a key.

Return to the chamber and go south. Continue until you reach an access point heading west from the wide corridor. This leads you into a big diamond-shaped room. Be careful because there's a demon casting spells at you. Try the doors to the north and west, then go south.



■ Lake City offers few facilities to the would-be tourist, consisting entirely of bars, take-aways and massage parlours. It's great fun for a night out, though.

Carry on west until you appear in a broad corridor. There is a lever on the right and a passage going east.

Pull the lever and take the passage east. The lever should have opened the door. Enter the room that's infected with spiders. Take the runic tablet and try all the walls because some of them are an illusion. Pick up everything and return to the lever. Go west and pass through the maze. Find the south door in the broad corridor. It goes onto a smaller area guarded by a magician. Kill him and take the talisman. On one of the walls are three levers. If you get the correct combination the south-east door opens and you can enter. Medusa

awaits you. Use the psychic shield from the dungeon.

When you've killed Medusa a dragon attacks you. Kill it. Now find a door at the end of the passage. Before you open it, wear your monk's disguise. Kill the monk on the other side of the door and cast a protective shield spell. Teleport.

A long corridor is in front of you. Before you get to Krogh you have to fight three monks. Use the psychic shield and kill the monks. Now use a protective shield spell, since Krogh casts lightning at you. You can't escape, so stand and fight. To kill Krogh ensure everyone has a tablet and that your magician has a talisman. Vorgula can now cast an anti-Krogh spell.

Congratulations! You've finished Ishar: Legend of the Forests.

■ Look! Loads of trees and not a bulldozer in sight!



UTOPIA GREMLIN

Thanks to 12 year-old Morne Syme of East Saltoun, Scotland for this Eldorian-beatin' cheat

■ Kaboom! An enemy missile strikes your command centre and knocks your colony out of action. Lucky this is just a practice run.



If you can't beat the Eldorians, start a tutorial and you get plenty of money. You're now able to slowly build up your colony and accumulate taxes. Then build shipyards and employ colonists – remember to give money to the military and civilian funds. Click on the shipyards and the information panel appears – click on the empty space between the warship and the fighter and give building instructions. Click on the shipyard again and you start to build Fusion Cruisers. Now put money in the spying fund – you can't spy in the tutorial. Build tanks, then invent and build 20 Hover Tanks. Save the game.

Reload the saved game. You're now playing the Eldorians. Send off all your Fusion Cruisers and Hover Tanks. If this doesn't kill off the enemy, build more cruisers and tanks to finish them off. You can now destroy your launch pads, shipyards, defence and tankyards since you no longer need them and your colony can expand. You only need one sports complex and command centre, so if you have more than one of each, destroy them as well for more space.

Build lots of living quarters and set the birth rate to medium to reduce the density of the colony. Give money to the colony's funds, use the sports complex a lot, build hydroponics, power stations, life support systems, space moss converters and security headquarters. You earn badges, medals and your scientists discover how to destroy waste which helps the environment. Your colony gets Utopia status if the quality of life is over 90%.



■ Tanks guard your fuel manufacturing facility. Shame the Eldorians are pounding the hell out of your life support systems then, isn't it?

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MUSICOM



Direct to hard drive recording systems usually cost thousands of pounds, but *Musicom* brings one to you for under £50

Isn't it just great to come first? Well, *Musicom*'s won the music-Falcon-software race being the first sound processing software package to appear for the new machine.

It's really a "fun" program – you can create excellent quality recordings using the software and then play them back using the special effects. The real-time effects are fun to use, especially the karaoke function but, apart from showing off the capabilities of the Falcon's Digital Signal Processing chip, it doesn't have much practical use.

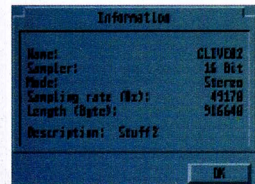
Inexpensive sampling

The Falcon's got a DSP 56001 chip and lots of other sexy hardware which means that it effectively has a built-in sound sampler and recording system that can record at greater sampling rates than compact discs or digital audio tape. To you, this means low cost software and the likelihood of an abundance of programs.

You can get 16-bit sampling rates of up to 50KHz in full stereo using just the *Musicom* software and a line input from a CD player, microphone or tape deck. Of course, the higher the sample rate, the more memory and hard disk space the sample takes up. Because of this, samples can be recorded at a variety of rates ranging from 8.2KHz to 49.2KHz in 8-bit mono, 8-bit stereo or 16-bit stereo.

All singing, no dancing

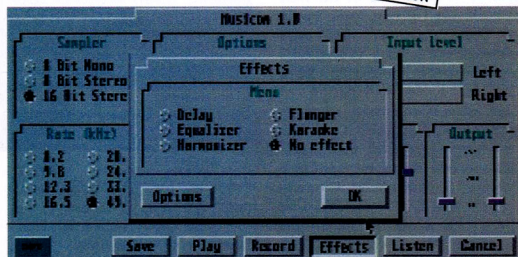
Musicom's main menu is divided into six areas controlling the sample resolution, the main options, the input level v-u-meter, the sample rate, hard



■ Once you have recorded a sample, a dialog box is displayed containing all the details of the sample including file length, sample rate and a description.

drive recording and input and output signal level controls. There is also a row of functions across the bottom of the screen controlling recording, saving and playing of samples along with a level monitor and effects control – everything is right in front of you just waiting to be used.

The program is so simple to use that you don't need a complex and detailed manual – and that's just as well since there isn't one. What you do get, however, is a 40 page CD size booklet that tells you all you need to know about sampling, the DSP 56001 and how to use *Musicom* on your Falcon. It gives you good clear instruc-



■ The effects menu enables you to process sounds in real-time – so you speak into the microphone and the speaker produces the processed sound.

tions about each function without swamping you with reams of technical jargon.

You control it like this...

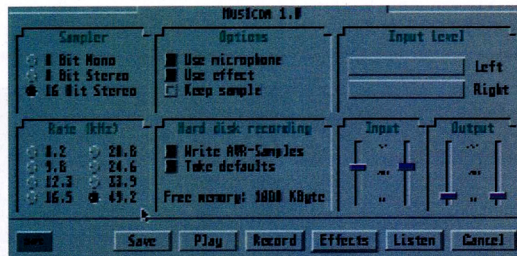
All on-screen controls are mouse-driven with keyboard short-cuts highlighted for each function. Plenty of thought has gone into creating the

interface with sliders for input and output levels and simple point and click options for recording, playback and special effects.

The level input control is used to decrease the strength of the line input signal so you can prevent distortion – which is vital to ensure good quality recordings – after all, what's the use of being able to make studio quality samples if the original source signal is crap? Similarly, you can regulate the output level from the corresponding slider.

To get the most from your samples you need an editing program of some kind – the HiSoft/AVR merger (see the news starting on page 7) is likely to result in the excellent sampling software designed for the Replay series of samplers being converted for use with the Falcon. It would be a good idea for an updated version of *Musicom* to include some editing facilities.

CLIVE PARKER



■ Using *Musicom* in VGA or interlace mode results in a 3D sculpted version of the main menu being used, this 3D effect is going to be incorporated into all future Compo software for the Falcon.

JUST FOR EFFECT

Musicom boasts real-time DSP effect processing, so what effects are there and what do they do?

Delay: known in the real world as echo, *Musicom*'s delay function enables the original sound to be combined with two delayed sounds for great echoey effects.

Equalizer: an ex-CIA agent who... sorry. The ten band graphic stereo equalizer can be used in exactly the same way as the one on your hi-fi. Various frequency bands can be adjusted to reduce or increase their sound level.

Flanger: Traditionally used with guitars, the flanger adds

a futuristic "woo woo woo" sound to the input signal. Really it does.

Harmonizer: ever fancied forming a one-man vocal trio? Well, now's your big chance. The harmonizer adds two extra copies of the original signal to the output, creating the effect of three voices singing in harmony.

Karaoke: this function can be used to strip the vocals out of pre-recorded music enabling you to sing-along-a-Max. Great fun for those late night parties where you've stupidly had one diet cola too many, the karaoke function works with about 60 per cent of all recorded music.

Musicom

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Highs

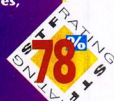
Simple to use, excellent quality sampling, brilliant special effects, great fun.

Lows

No editing facilities, requires lots of RAM and disk space; limited practical use.

What else?

■ Nothing else on a fun level, D2D Systems (☎ 0223 420252) are working on FalconD2D Edit, a four track professional hard drive recording system for £150.





MAKE MUSIC LIKE THE MASTERS WITH *STF*

Next month we're going to be showing you how you can get into creating brilliant music on your ST; we'll tell you about all the bits of hardware and software you need and how exactly you go about putting the next chart-topping tune together - don't miss it!

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TRUEPAINT



How would you like to be let loose in a 65,000 colour environment? Clive Parker checks out the first Falcon paint package

If you think that *TruePaint* is just another ST paint program that happens to run on the Falcon, then you couldn't be more wrong.

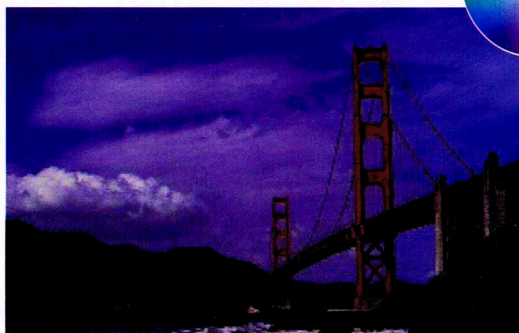
It's actually a fully fledged Falcon030 program that uses the machine's colour capabilities to their full effect so you can create true colour pictures and animations with over 65,000 colours on-screen. As a bonus, *TruePaint* is compatible with the entire ST range of machines, running on any ST with 1MByte of RAM or more in any resolution. It's also compatible with all add-on colour graphics cards on Mega STs and Mega STes, such as the Crazy Dots card we featured in issue 45.

In the tool-shed

All the standard drawing tools are present: lines, circles, rays, boxes, air-brushes and fills. Other options include Bézier curves, the ability to create regular polygons with a definable number of sides, the segment tool to create wedges, a special dot tool to draw a series of pre-defined dots instead of lines as well as a comprehensive text tool.

The text tool uses the default system font and is capable of using both Font GDOS bit-mapped fonts and Speedo GDOS outline fonts. You can do all the usual text effects using GDOS fonts – or you can enter outline font text at any angle. Bitmap fonts can only be displayed in multiples of 90 degrees.

The most powerful colour tool in *TruePaint* is the brush; it provides a selection of colouring and blending effects in any mode but is most effective in true colour mode. It can tint existing colours, smoothing the area where different colours meet so they blend together, lighten or darken



■ To get the full picture in *TruePaint*, press the <Clr Home> key. The cursor keys enable you to scroll around pictures larger than the screen.

areas of a painting or change from one specified colour to another. This tint acts in the same way as a wash of water works on a watercolour painting, giving the picture a translucent effect almost like a real painting.

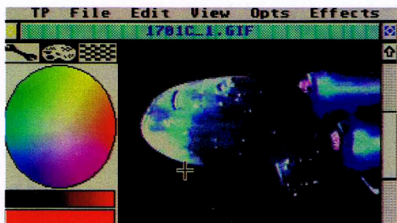
Getting started

Although the *TruePaint* software is easy to use, it is worth studying the manual to get the best from the program, especially where true colour

brush modes and colour animations are concerned.

It works with the standard GEM interface using menus and icons, with the added bonus of keyboard shortcuts for every command. You should be able to find your way around the various functions within a few minutes of running the program.

TruePaint has not been developed as a top-of-the-range photo retouching tool, it is designed as a basic introduction to the true colour graphics



■ *TruePaint* enables you to view the picture you are working on in a standard GEM window with the tool-box icons on the left of the screen.

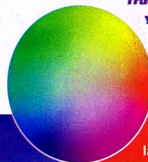
How to deal with file formats

Gone are the days of worrying about exporting and importing new formats

HiSoft have solved the problem of importing the many picture file formats used on other machines with a system of file loaders called EFMS (External File Management System). *TruePaint* can import Degas, GIF, IFF, ILBM, IMG (including XIMG), JPEG, FIF, Neochrome, Targa, TIFF and its own TPI files. *TruePaint* can also

export files in all these formats. The EFMS files are not part of the main program and are installed when *TruePaint* runs – the advantage of this system is that when a new file format appears, a new loader can be written for it and placed in the EFMS folder – this makes *TruePaint* future proof. HiSoft are incorporating the EFMS system in all their new software including *Superbase Professional 4* and *K-Spread 5*, an EFMS developer's kit is also available.

■ Choosing hues is easy with *TruePaint*, just select the colour you require from the colour wheel and start painting.



The keys

You can use a set of standard keys for block manipulation; <Control> <X> is used for cutting, <Control> <C> for copying and <Control> <V> for pasting. This standard set of command keys is implemented in all new Falcon software and takes advantage of the Atari clipboard included with the *Xcontrol* panel. These type of functions are in use in all Macintosh software.

capabilities of the Falcon and is earmarked to become the Falcon equivalent of *Degas Elite* or *Neochrome*. Because of this, it is not packed with the weird and wonderful features that more complex graphics packages such as DA's *Vector* or the forthcoming *Chagall* boast. Instead there is only a set of basic drawing tools along with a few advanced functions.

Verdict

TruePaint is an excellent starting point if you want to get into true colour art on your Falcon; it's already been updated once since it was released and HiSoft are very efficient when it comes to customer support – they always inform you of updates and improvements. Good stuff. **stf**

TruePaint

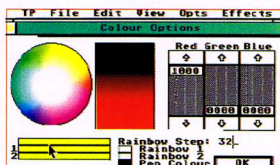
£39.95 HiSoft
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Falcon030, all STs and
TTs with 1MByte or more

Highs

- Supports a large number of file formats.
- Great little animation function built-in.
- HiSoft's customer support is such that you never miss out on any forthcoming updates.

Lows

- Screen updates can be a bit slow when you are scrolling.
- You need at least 4MBytes to use the built-in animation function effectively.
- Could do with more drawing functions.



■ With so many colours available it can be a struggle getting the exact colour you want, the Colour Options menu helps by showing the spectrum.

82
RATING
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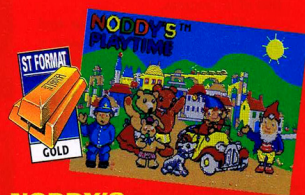
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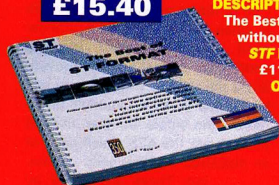


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THE BYTECRUNCHER'S GUIDE TO ASSEMBLY



Menus and windows add quality to your programs. This month, Tony Wagstaff shows you how to create them

Using menus and windows adds a professional touch to your programs and makes them easier to get to grips with. Most versions of BASIC have menu and window functions enabling you to easily access these GEM functions. Lower level languages like C come supplied with libraries that remove a lot of the headaches that you can get when using GEM.

In raw assembly though, things can be a bit trickier. Sticking to the objectives of this tutorial, we

the AES. If you own *Devpac*, you can find a ready made collection of AES macros in the GEM-MACRO file. If you don't have these macros, you can still access the AES, but your listing won't be as easy to read.

The ins and outs

The macros organise a lot of the arrays for you, but it's still worth knowing a little about their setup as you occasionally need to access them directly before using the macros. The two main arrays which you need are labelled `int_in` and `int_out`. `int_in` is used to pass information to the AES, while `int_out` returns information after a call. `Wind_set`, which can

nates and size into elements one to four of `int_out`.

Now that you know a little about the AES, you can look in detail at the `WINDOW.S` listing on this month's Cover Disk. Having returned unwanted memory in the initialise program routine, the first thing you have to do in the `init_aes_vdi` routine is to tell the AES you want to use its services. You also have to open a virtual workstation - this enables you to use the VDI's (Virtual Device Interface) graphics routines. The VDI works in a similar way to the AES, using its own set of data arrays, and you use it to fill in the backgrounds of all your windows.

`Wind_get` is the first window call you make. The first parameter is zero, which tells the AES you want information about the Desktop. The second parameter, `WF_WORKXYWH`, defined as four, gives you the worksizes of the Desktop, that is the area excluding the menu bar. We use these dimensions later to ensure our windows never hide the menu bar.

Open up

The `window_flags1` label determines the features of the first window, whether you want a title bar and a size box. Having this set

contains the window's handle - this is a number and is used to identify the window.

If you only use `wind_create` you would never get to see your window, as this function doesn't actually draw it. That's the job of the `wind_open` call, which receives the window handle, and the initial position and size.

Once all your windows are open, you hang around waiting for something to happen. This is where the `evnt_mesag` call comes into play, informing you if anything has happened to your windows; for example, the person using your program may have moved them.

The address labelled `message_buffer` contains a number indicating what occurred, while `message_buffer+6` contains the handle of the relevant window. Depending on the event, various actions are taken before looping back to `evnt_mesag`.

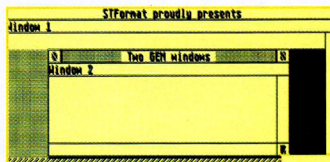
Walking the rectangle

One of the more interesting events is when the contents of a window need to be redrawn because another window above it is moved. Since the second window may still be on top of it, it wouldn't do to redraw the whole window. Instead you can ask the AES which parts of an obscured window need redrawing. These are stored by the AES as a list of rectangles. When `evnt_mesag` returns a redraw message, the `message_buffer` contains the top left coordinates and size of the area covered by the top window before it was moved.

Your program then needs to check which segments of the background window need redrawing. This is done with the VDI `vs_clip` routine, which instructs the VDI to limit all graphics operations to within a defined rectangle.

To get to grips with this, try varying the features without necessarily sticking to convention. For example, you might write a routine that stacks all your windows when the user clicks on the full button.

Next month we are going to look at the other main features of the AES - such as menus, alerts and the file selector. **stf**

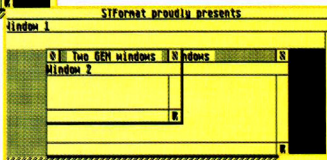


■ The rectangles of the background window are returned with the `wind_get` call using `WF_FIRSTXYWH` and `WF_NEXTXYWH`.

are going to make the use of windows and menus as easy as in the other programming languages.

Windows and menus are part of the Application Environment Services (AES). The AES is accessed in a similar way to the BIOS and GEMDOS - using traps. One big difference though, is that the parameters are not placed on the stack, but in a set of six data arrays - each array being a reserved portion of memory containing a number of two-byte values, or elements. Whereas the BIOS call `Bconout` #'a' would push the 'a' onto the stack with a `move.w #'a',-(sp)` instruction, an AES instruction such as `wind_open` - which opens a window - puts the required position and size of the window not onto the stack, but into one of its arrays.

Just as we used macros to do a lot of the mechanical work when calling TOS - like adjusting the stack - we can do the same with

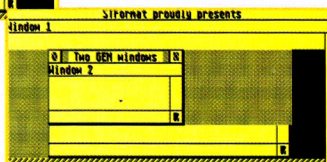


■ You can still see the old window so you now need the background window to be redrawn.

be used to change the size and position of a window, needs the x and y coordinates in `int_in` elements two and three, and the width and height in four and five. The values are moved like this:

```
move.w #x,int_in+4
move.w #y,int_in+6
move.w #w,int_in+8
move.w #h,int_in+10
```

Notice that you need to double the element number to calculate its offset as each element is two bytes long. You also need to remember that your ST starts counting at element nought. `Wind_get`, which is used to access information about a window, also returns the coordi-



■ You can calculate exactly where the background rectangle overlaps the dirty rectangle.

up for each window, the `open_sesame` routine displays it.

This routine's first call is `wind_calc`, which returns the top left position and size of your window to its maximum size. `Wind_create` tells the AES the type of window you want, the first parameter indicating the features you need, as defined in `window_flags1`, followed by the maximum position and size. After the call, `int_out`

HIGH RESOLUTION ARTISTRY

Last month we gave you the lowdown on a colour PD art package, this month Clive Parker dissects the high resolution equivalent, *Pad*

Although there are plenty of expensive, professional quality, high resolution art packages around for your ST, PD and Shareware graphics programs of the same high standard are not so readily available if you have less cash to spare.

A talented German chap, Heiko Gemmel, has developed a stunning Shareware art package called *Pad*, and it's as good as any commercial program on the market. The version available from PD libraries is fully functional and is supplied with a brief document file, to obtain the full instruction manual and information on regular updates you need to send 30DM to the author, that works out at about £12.50. A full directory of PD libraries is on page 95.

Getting going

To use *Pad* you need a setup consisting of an ST with at least 1MByte of memory and a mono monitor, you can fake it with a mono emulator like *Sebra* (ST FORMAT Cover Disk 40) if you like, but a dedicated monitor is recom-

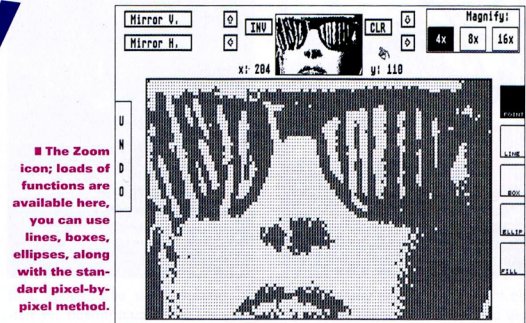
mended for best results and a little less eye strain. With a 1MByte machine you can work on about eight pictures at once, but if you have 4MBytes of memory, *Pad* can cram in an incredible 100 pictures. It has been beautifully designed and developed and is controlled completely by on-screen icons or keyboard shortcuts.

Extra padding

Pad is packed with all of the standard drawing functions that you would expect to find in a graphics package of this quality, it also has a host of features and effects that you expect to see in software costing up to 20 times as much.

The main work area is divided in half for much of the time, the top half is taken up by a block of 47 icons while the lower section shows the bottom of the current picture. Left-clicking on the picture displays the full image, while selecting most of the drawing functions either takes you to the full display or to a sub-menu.

Grabbing a block to work on is performed by clicking on the



Block In or the Lasso In icons on the workscreen, Block In selects a rectangle while Lasso enables you to grab irregular shapes.

Once you have selected your block you zoom in to a sub-menu where you can try out some of the weird effects. If your block has loads of ink in it then try the Use Pattern option, this replaces the black ink with the current fill pattern and can provide some interesting results. The vertical and horizontal bends and distorts are particularly effective, while the out-

lining options convert the bit image into an outlined drawing, rather like converting normal text into outline text.

When you are happy with the results of your frantic manipulations, left-click the mouse and the changes are saved. Pressing <Undo> undoes any effects or alterations you don't like.

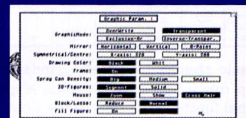
More weird effects

Most art programs require you to select the current workscreen from a menu, indeed *Pad* has an icon to

LOADS OF OPTIONS

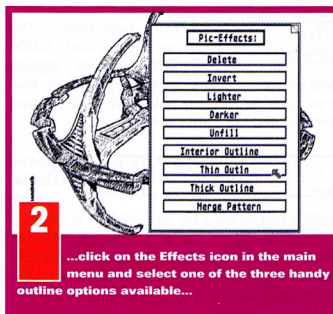
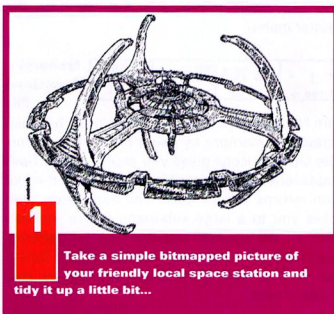


The Block functions are particularly impressive - not only does *Pad* provide the usual rotate, size, cut, paste and mirror effects, it also features more exotic and unusual functions.



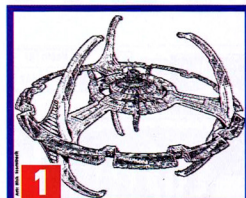
You can adjust almost every aspect of the drawing from the parameter menu. Everything from the graphics drawing mode to the Spraycan density can be set from the graphics parameters menu.

Creating a simple outline - those first few steps



Merge, mingle, mix, combine, join... and be creative

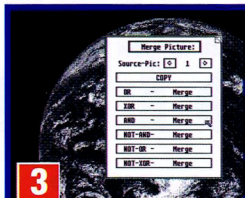
One of the brilliant functions of Pad is the ability to merge different pictures together to create a new image, follow these four easy steps and check out the great results you can get from merging frame one with frame two



1 Here's that good old space station again loaded into frame one, it looks a bit boring on a plain white background though...



2 ...so, why not find an interesting picture of a local planet that can be used as a suitable background and load it into frame two...



3 ...and then select the Merge option from the icon menu. Select 1 as the source picture and then - go ahead and merge...



4 ...and you end up with a superb picture reminiscent of 2001: A Space Odyssey. Does Stanley Kubrick use an ST for his work?

do this. Alternatively, you can simply click your left mouse button on the picture area, and keeping the button pressed you can scroll up and down through the picture files by moving the mouse backwards and forwards.

Selecting the Merge Pattern option from the Effects icon enables pictures with large solid areas of ink in them to be textured by replacing the black areas with a

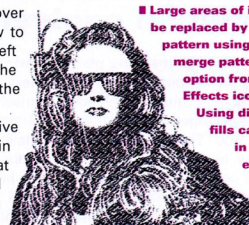
fill pattern. You can design and save as many customised fill patterns as you like by selecting the Parameters icon and going to the Settings menu.

Another two groovy effects are the Sponge and Trace functions; Sponge enables you to paint in areas from frame one onto the current drawing - click on the Sponge icon and pull out a rubber-band box and then release

the button. Moving the box over your picture acts as a window to frame one, pressing the left mouse button while moving the box then draws over all of the current pictures.

Different write modes give different results. Trace works in the same way, except that frame one is displayed and you can accurately trace in the areas you want to copy. **stf**

Large areas of ink can be replaced by a fill pattern using the merge pattern option from the Effects icon. Using different fills can result in weird effects.



ONE HUNDRED AND ONE ICONS EXPLAINED

Icons, don't you just love 'em? Well, we do, 'cos they make everything so much easier to use than boring old drop-down menus. Here's a full run-down of the main functions of Pad



Basic shapes - All pretty standard stuff on the top row - boxes, circles, arcs, ellipses and the other functions are selected by a button click.



3D shapes

- Pad enables you to generate four kinds of 3D shapes - once you have selected your shape, click the left button to start the shape and pull it out to the size required, then click again. You now drag out the 3D section and click once more to fix.



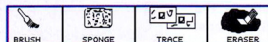
Circles and dimensions

Create a circle by clicking three points in the picture. N-Corners enables you to create a circle by a set number of corners between three and 20 - a three-cornered circle is, er, a triangle. X-dimension and Y-dimension enable you to add dimension lines to technical drawings, measured in pixels, centimetres or inches.



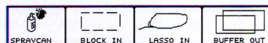
Lines and stuff - Freehand drawing, lines, rays and a whole lot of other standard drawing

options. Bézier curves, parallel lines, perpendicular lines and quarter ellipses are also generated from all these icons.



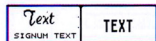
Larger areas

The brush enables you to draw over large areas using either the pre-defined or your very own customised brushes. Sponge and Trace enable sections of two drawings to be merged together, while you use the eraser to wipe out areas you no longer need.



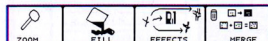
Graffiti corner

The Spraycan can be used to daub any area of the picture with the current fill pattern, it can be very effective. Block, Lasso and Buffer are used for cutting and pasting areas of the screen and performing effects on selected areas.



Text functions

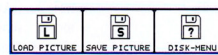
- Pad can use either GDOS GEM fonts or Signum fonts as well as the standard system font. Features such as rotated, bold, underline, outline and italic text are supported.



Special effects

- Zoom enables you to work on your picture in close up at either 4x, 8x or 16x magnification, ensuring that every pixel is perfect. Fill is used to paint an enclosed area with the current fill pattern. The Effects icon takes you to a sub-menu where you

can delete the entire drawing, invert the pen and ink colours and make the picture lighter or darker. The outline functions and the merge pattern option are also available from this menu. The last icon in this row takes you to the Merge sub-menu where you can merge different pictures using logical functions like AND, OR and NOT to give various results.



Disk access

- Load and save pictures in various formats including Degas, Neochrome, STAD and IMG. There is also a full disk utility kit enabling disks to be formatted, folders generated and files to be erased.



Printout

- Printing is very well supported in Pad with a number of built-in 9-pin and 24-pin printer drivers. If the

drivers don't work correctly with your printer you can create a customised driver from the printer menu.



General functions

- The Picture Number icon enables you to move between screens in memory by using the + and - icons. The Options icon gives you access to any Desk Accessories you may want to use, while the Exit icon returns you to GEM. The Parameters icon takes you to a large sub-menu where you can alter all the general settings. The fill patterns, brush size, line parameters, text format, Spraycan and graphic parameters can all be customised here.

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QUIZMASTER 1.2

CALEDONIA PDL
STEs ONLY
DISK STE52

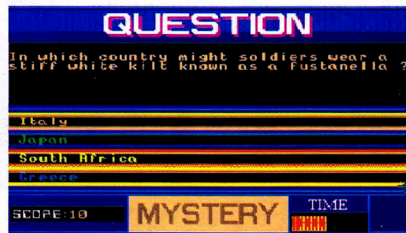
Quizmaster is a pub-style general knowledge game with three difficulty levels and a host of brain-meltingly tricky questions.

Programmed in STOS, Quizmaster is presented in a text-style format with some choice sound samples, including the *Miami Vice*

theme. The questions cover a wide range of categories including science, sport, music and TV and they're all set against a time limit.

Quizmaster's a great example of the sort of stuff you can get from the Public Domain and is going to have you and your family clustered around your ST long after the last punters have been ejected from the Dog and Duck.

STF RATING: 69%



■ Quizmaster gives you the answers to the questions you never even knew existed, like "What does knit 1, purl 1 mean?" and "Who does Kenneth Branagh think he is?"

JASSS

CALEDONIA PDL
DISK GM157

Programmed in STOS Basic, *Just Another Silly Sports Sim* takes a light-hearted look at those joystick-wagging and keyboard-bashing sport sim ST games like *International Sports Challenge*. You and up to three of your mates can take part in eight dif-

ferent events which include shooting, boxing and high-jump.

What sounds like a great idea in theory is let down by poor execution – the joystick controls are unresponsive and the graphics are crudely drawn with ropey animation. However, the game does possess a certain naive charm and even the frequent spelling errors don't irritate too much. With a title like *Silly Sports Sim*, more could have been made of the gags and spoof events included. Nude tennis, anyone?

STF RATING: 51%



■ "And Rob enters the Guinness Book of Records with the shortest long jump in history... how does he do it?" "I think he slipped on a dog turd, Dan." "Ah."

GAMES

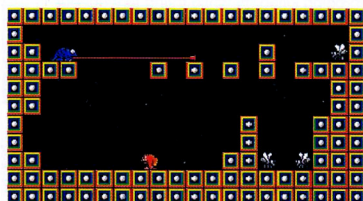
COLOUR CLASH

LAPD
DISK G280

Animal Soft consistently come up with the goods in the gameplay department and *Colour Clash* is no exception. This time the hero is a chameleon with remarkable skills.

You have to guide the little yellow chappie around a series of levels, avoiding baddies and collecting juicy flies. This is no ordinary arcade game, however, and you need to get your thinking cap on because getting the chameleon around requires brain power as well as leaping ability.

Luckily there are four different power-ups you can collect which invest



■ If you can't get what you want, it's time to put your tongue into action as Charlie the Chameleon finds out in *Colour Clash*.

SOFTWARE PROJECTS

AQUILA
DISK AP 1

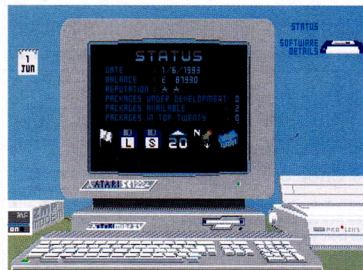
Software Projects is a simulation that puts you in control of a software house which is battling to stay solvent and put its stuff at the top of the charts. You develop new software, spend money on advertising

and watch them make or break in the market place. You need to keep an eye on your finances and juggle with income and expenditure.

The whole gameplay takes place on a Mega ST on-screen and is mouse controlled. It's an interesting angle to simulation and pretty playable too.

Software Projects should appeal to the thoughtful planning type who'd rather play games about releasing games than play games.

STF RATING: 68%



■ *Software Projects* puts you in control of a software house, month by month you develop and market software reaching for the ultimate goal – a red 300ZX Turbo and an ulcer.

MARIO'S QUEST

LAPD
DISK L38

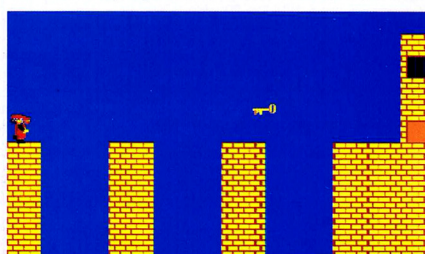
Console hero Mario finally makes it onto your ST in this *Hunchback* clone. There are over 150 levels for you to explore – your aim, to collect one key from each level and rescue an imprisoned princess.

The big problem with Mario is that he's virtually impossible to con-

trol – getting the little chap to run along is OK, but it's making him jump that has you smacking your head against your ST in frustration.

Even the early levels are no laughing matter because you die, die and die again. The graphics are deadly too, and there's absolutely no character in either the animation or backgrounds.

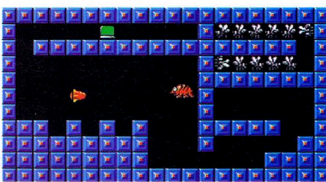
STF RATING: 22%



■ Can the fat Italian make it across the ravine and get the key, or is he off back to the kitchen to get some more packet ravioli?

your chap with specific skills – green ones enable you to kill baddies and destroy blocks, for example, while red means you can inflate and float to the top of the screen.

Colour Clash is great fun to play – the chameleon is cutely animated and explodes when you die or hit the self-destruct option on the menu bar. The puzzles get more and more fiendish as you work your way through the game and there's enough playability to keep you at your ST for hours. The only bad point is the slightly awkward control mechanism – selecting Up on your



■ Collect the red power-ups and the chameleon can inflate and float to the top of the screen, collect the green ones, and destroy blocks.

joystick pauses the game and selects an option from the menu bar – this means you can select self-destruct without meaning to.

STF RATING: 85%

PSYCHO PIG 2

LAPD
DISK G281

Insurance clerk by day, superhero by night, *Psycho Pig* is the gun-totin' protagonist on the trail of some kidnapped baby crocs.

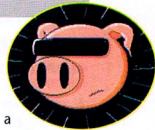
The action takes place over four locations – jungle, desert, mountains and underwater – with a variety of obstacles and baddies for you to avoid and bonus objects to

collect. You also get three lives and three continues to help you on your quest.

Psycho Pig is a competent platformer with smoothly-scrolling graphics and slick joystick controls.

The game also has plenty of humorous touches which help lift it out of the ordinary.

STF RATING: 72%



■ Pigs, baby crocodiles and turbo-charged flying penguins? What is this? Well, it just has to be *Psycho Pig 2*, one of Animal Soft's latest arcade games.

ATOMIX

BY TONY MARTIN,
LICENCEWARE
LAPD
DISK L35

This is a puzzle game with *Physics* as its central theme. You're presented with a grid filled with different colour atoms, each with different values. You have to combine lower-valued

atoms to create higher-valued ones, your aim to fill the board with as many high-scoring atoms as possible.

However, with a limited number of turns and the chance of sudden death, sussing this game out isn't as easy as it first sounds.

Atomix is an intriguing game with five different levels, an interesting two-player option and up to 25 rounds of gameplay.

The concept takes a couple of minutes to get the hang of, but once you do, it suddenly becomes surprisingly addictive.

STF RATING: 63%

■ Even Einstein had trouble figuring this little lot out – see if you can do any better with Tony Martin's *Atomix*.



FOOTBALL TACTICIAN

GOODMANS
DISK GBU113

Football Tactician is a Budgie UK game which places you in control of one of 24 clubs in a management sim to rival its full-priced cousins.

Gameplay takes place on a main menu with a series of options straddled across a selection bar at the top. From here you can view

transfer lists, league tables and select that all-important team for Saturday's game against Bristol Rovers.

As your players battle it out on the pitch you're inundated with news from other clubs, detailing injuries, player transfers and board-room squabbles.

This is a competently put together footy sim, but sadly leaves you feeling uninvolved as you seem to have to spend most of your time

reading news bulletins and crying in your beer as Tranmere Rovers slaughter Man Utd 6-0.

STF RATING: 53%

■ There are 24 clubs from Barnsley to Wolves in *Football Tactician*, the footy management sim for retired Cloughies.



DEMOS

POWER RISE DEMO

CALEDONIA PDL

DISK STE42

Another megademo in the classic format. You guide a groovy looking chap along a corridor, with a very clever parallax-scrolling floor, to the

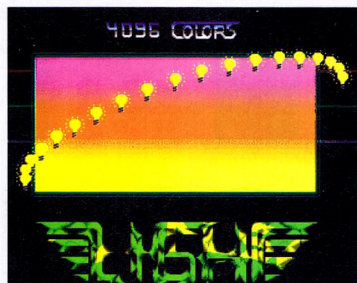
seven sub-demos. Nothing too wild or original, although the sampled sounds that accompany things lift them from the ordinary.

There are vector balls, vector dots, the infinite sprites trick and of course plenty of scroll text to read. You can fiddle with a few parameters on some of them.

Not bad, but nothing particularly stunning either.

STF RATING: 65%

■ You need a1MByte STE to run the *Power Rise* demo and to show this off on a couple of screens including this one – here you scroll through all 4,096 colours.



NUT HOUSE DEMO

STATE 808

DISK MOD 21

This consists of 18 minutes of sampled house music, with the visuals limited to a spinning logo. Could come in very handy if you find yourself stranded with your ST and no

stereo and in dire need of some dance music. Other than that, it really only serves as a showcase for the music programmer's skill – which is not bad at all – but it lacks originality or involvement.

If you collect sample music for your ST then you must get your hands on it, otherwise listen to their stereo.

STF RATING: 57%

■ Not much to look at, the *Nut House* demo features a huge sampled tracker song. You can send the output to Replay cartridges, the STE's DMA chip or an MV16 card as well as through the ever faithful Yummy sound chip.



MORE DEMOS

THE BUNCH DEMO FLOPPYSHOP ST DISK DEM 3292

A old-fashioned megademo with a myriad of sub-demos. All the favourites are here, spinning dots, vector balls and big smooth lines of text gliding past. Most of the demos

purport to be written in GFA Basic, if they are, then there's one very clever coder out there.

Most of the sections look very similar and once you work your way through them there's little incentive to do it all over again unless you're also a demo coder or a member of the coder's immediate family.

STF RATING: 55%

■ Stop us if you've seen this before, but *The Bunch* demo has you guiding a little sprite chap to various doors to enter the sub-demos. Not the most inspiring start leading to some not very inspiring sub-demos.



MY DYING BRIDE NIGHTSHIFT DISK DEMO 145

Another demo featuring a band from the Peaceville label, and what a nice bunch of blokes they are too. The song is called *Erotic Literature* and the

sample sounds are like nothing on earth. Grinding, chugging, raw electric guitars and vocals sung by someone who has been possessed by the horned one or has a particularly bad throat infection.

The demo in itself is fairly competent – good long samples and a few blurry digi-pics. It's only going to appeal to you if you're a deathmetal fan, and then only a bit.

STF RATING: 48%

■ You can't make out the vocals in the *My Dying Bride* demo, this may well be a good thing. It's loud, it's raucous, it's not very good.



UTILITIES

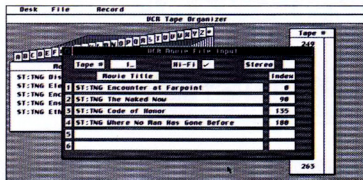
VCR TAPE ORGANISER AQUILA PD DISK PLS

Have you got stacks of video tapes rammed into cubboards all chock-a-block with films and shows? If you have, then you'd better get organised. This disk from Aquila PD boasts several different VCR organisers, but the attractively named *VCR Tape Organiser* is by far the best of the

bunch. A simple file card format is used with the facility to list up to six titles per tape along with details of the tape index, hi-fi and stereo sound tracks. A handy on-screen filing cabinet enables titles to be searched for alphabetically and another window enables you to search by tape number. Wonderfully easy to use, *VCR Tape Organiser* may not have every option under the sun, but it does the job without fuss.

STF RATING: 85%

■ Clive spent six hours cataloguing his collection of 79 episodes of *Star Trek* and 125 episodes of *Star Trek: The Next Generation* just to review this utility.



DIGISTUF FLOPPYSHOP DISK MUS3547

Digistuf is a collection of sound utilities for your STE, but because they all use sound samples stored in memory, you need at least 1MByte installed in your machine.

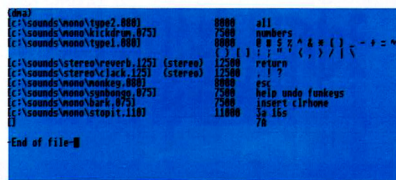
The most outstanding of the utilities is called *Click* and is used to replace the standard keyclick of your machine. The keyclick isn't replaced

by a single sound sample, if you want, each key can have a specific sample assigned to it.

A simple .INF file created with a text editor controls the whole setup and it is a very simple task to add your own homemade samples to the system – you can even use groovy stereo samples.

Digistuf makes using your STE an audio extravaganza.

STF RATING: 82%



■ This stunningly boring screenshot is the ASCII information file that tells your machine which key plays which sound in *Click*. It's great.

INTERFACE CALEDONIA PDL DISK AU212

Interface is a resource file editor and creator mainly of use to utility programmers and die-hard hackers who want to find out how a particular program has been put together. Resource files are the part of a GEM

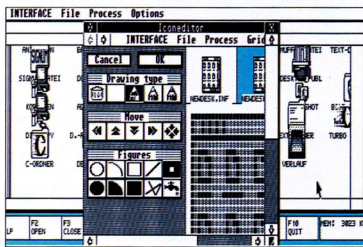
program that contain all the information about windows, icons, menus, alert boxes, forms and dialog boxes.

Using this editor, creating .RSC files to go with your main program code is a breeze.

It's as easy to use the excellent WERCOS program and just as good, if not better. It is let down a little by a lack of English documentation, but if you're a programmer, *Interface* is an excellent addition to your toolkit.

STF RATING: 76%

■ Using *Interface* you can edit all those wonderful Desktop and window icons supplied with TOS 2.06.



PD HIGHS AND LOWS

Highs

Doing a really clever trick with the chameleon's tongue in *Colour Clash*.

Getting your video collection well and truly sorted with *VCR Tape Organizer* and rediscovering that lost episode of *The Persuaders*.

Running *Biorhythms* and finding that all the waves are near the top so you can feel great about yourself.

Thrashing your family at *Quizmaster* and proving that all those hours spent watching TV really were an educational experience.

Running *Interface* and adding "interesting" alert boxes into someone else's application programs.

Lows

Playing *Mario's Quest* and suddenly realising that there are 150 levels.

Running *Biorhythms* and finding out that all your waves are at the bottom meaning you may as well stay in bed all day feeling really rotten and sorry for yourself.

Dreaming you are inside *The Bunch* demo and stuck in a world consisting of spinning dots, vector balls and wibbly scrolling text lines that just contain instructions for the only possible way out.

Someone running the *My Dying Bride* demo, turning the volume to maximum and super-gluing your hands to the desk.

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DEMONSTRATIONS

DEMO 185 - Cosmic Jam by Imagina. STE Only
DEMO 168 - Swiss Magdalen, brilliant main menu.
DEMO 182 - A Little Bit Inmate by Lazer. STE Only
DEMO 193 - Magic Friend by 2 Unlimited. 1 Meg
DEMO 195 - Autopsy: Act of the Unpredictable. STE Only
DEMO 200 - Grotesque Demo - STE Only, 1 Meg
DEMO 204 - Revolution Magdalen by Star
DEMO 208-209 - Choice of Gods. Preview. **£3.00**
DEMO 211 - X-Plation. Demo. STE Only
DEMO 215 - The NPG Mega Demo.
DEMO 139-142 - The Phobon Gigademo by Next
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APPLICATIONS AND UTILITIES

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BUS 1 - Invoice & Statement generator demo. Namelet (1 Meg), Sales Controller 'H'
UTIL 39 - ST to PC, Calendar 4.7, Desk Switch, Form, Autofix, System 2, Format, GDOS select + many more 'A'
LANG 59 - GND C++ v2.1 Development System. 5 disks. Hard disk and 2 Meg needed **£6.50 'A'**
PRO 23 - Video Master Extra Functions disk **£2.95**
UTIL 42 - Intro Maker
UTIL 46 - STOS Shoot 'em up builder kit
MUS 23 - Sound Merlin, Mozart Dice Waltz 'H'

SOUNDTRACKER MODULES

These disks contain brilliant quality tunes at great value for money. All disks come with the STOS tracker which is a complete module editor, creator and player. There are versions for both the ST and the STE on every disk.
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TRAC 76 - Arabia, Game, Teeling, R1a, M and M, Superbaz, Push - H, Led, Sky 'I'
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TRAC 83 - Dungeon, Little, Maximum, Mission 2, Phoenix, Scene 2, Scenerium, Sweet, Tansore
TRAC 90 - Apology, Classic, Egypt, King Tut, Lazy, Loose, Mahoney, Timeslip, Titan

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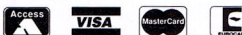
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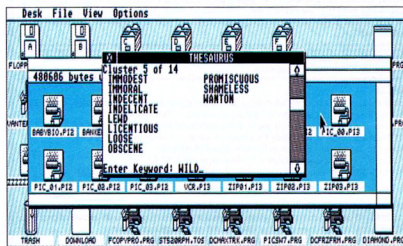
Here's an excellent utility that can be used with any GEM word processor – a thesaurus. It works a lot better on a 1MByte machine because it takes up 200K of valuable RAM.

The *Thesaurus* is a Desk Accessory so it can be swiftly called from within any word processor that provides access to the GEM menu bar. That's *Write*, *Write On* and *Protext* are

just a few of the better known examples. To use the program, select *Thesaurus* from the Desk menu and enter the word you wish to find a synonym of. Entering the word "wild" for instance, resulted in over 100 synonyms in 14 different contexts.

This Desk Accessory may not be the most complete *Thesaurus* in the world, but it's a good deal more affordable than any of the commercial offerings.

STF RATING: 65%

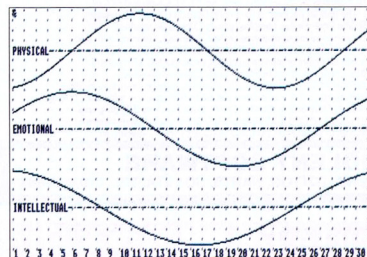


■ *Thesaurus* managed to find over 100 synonyms for the word "wild," – crazy, demented, deranged, unbalanced, lunatic and maniacal are just a few.

BIORHYTHMS

GOODMANS INTERNATIONAL
DISK GD1583

Biorhythms are a grey area in the medical world, they are either dismissed as complete claptrap, or regarded as supremely accurate guides to your well-being on a month to month basis. This disk con-



sists of a selection of biorhythm programs all giving much the same results. *Bio-Graph Elite* is the most graphically pleasing out of the lot, but it is only a demo version and you can't enter data.

It does have a detailed text file explaining exactly how to interpret the biorhythm charts generated, and this can be used with the other bio programs on the disk. OK for mystics.

STF RATING: 62%

■ Clive's biorhythm chart for May '93 shows that he will suffer an emotional crisis during the latter half of the month and be intellectually crippled for most of May.

CALAMUS FONT VIEWER

PD4U
DISK D087

Calamus fonts often leave out many of the more obscure foreign characters that, perversely, you need to use in your document. The problem is though, you only tend to realise this

when you actually need them. Well, now you can view any *Calamus* font by using the handy *Font Viewer* by John Charles. Select the font you wish to view and load it using the file selector, you can then click on boxes to show upper case, lower case, numbers and foreign characters to see exactly what you've got. Previously you have only been able to tell by loading the font into *Calamus* itself. Handy and clever.

STF RATING: 60%



■ Happily, the Brush-style Script font we gave you on Cover Disk 46 contains all of the weird foreign characters – would we ever short change you? Of course not.

ART AND MUSIC

PAINTPOT

GOODMANS
DISK GD 1917

Originally a commercial program, *Paintpot* is now Shareware. When you register your copy, you get the manual and an updated version.

It runs in all resolutions and uses a combination of menus and icons to enable you to access the functions. There are all the drawing tools you would expect and some you wouldn't, these include pie charts, multi-coloured spray and wire

frame objects. One slightly annoying feature is the way that the palette changes from drawing into the tool box.

Putting that little grumble to one side, it's a fastish and reasonably capable art package, certainly beats the majority of PD offerings into a cocked hat.

STF RATING: 84%



■ *Paintpot* joins a crowded art scene and pushes its way towards the front. It's easy to use and covers all the basics and a bit more.

CVG CLIP ART

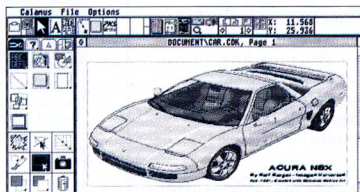
PAGE 6 ST LIBRARY
DISK ST726

Another specialist disk. This one is crammed full of clip art in *Calamus* Vector Graphics (CVG) format, over 60 altogether. One of the great features of a vector graphic is that it can be enlarged to any size without any loss of detail.

Some of the files are very detailed and many hours of work have gone into the drawings. Most of the drawings are simpler in scope,

and are made up of less complex outlines and shapes. They can still be very useful to *Calamus* owners, as they lend a professional air to illustrations in documents. Most of the files are catalogued in a couple of tiny format pictures with a viewer enabling you to look at the disk contents.

STF RATING: 60%



■ This superb illustration is just one of the many detailed vector graphic files on the disk – but you do need *Calamus* to make use of them.

MIDI FILES

ARROW PD
DISK MID15

So you've got a MIDI keyboard, your trusty ST and a MIDI sequencer program, but you can't play a tune to save your life?

The answer is to cheat (just a little) and use ready made tunes saved in MIDI format and bung them into your sequencer. You can then impress your friends by showing off your musical skills and trying to persuade them that it was really you who played the tunes.

The music files on this disk are standard type 0 MIDI files and can be loaded into practically any sequencer that can cope with MIDI files. All 36 tunes are well executed and most are famous enough to be instantly recognisable – ranging from the Axel F theme from *Beverly Hills Cop* to *Sergeant Pepper's Lonely Hearts Club Band* by the Beatles.

Commercial MIDI tunes can cost anything from £5 each, so this Public Domain compilation is a bargain by any standards.

STF RATING: 75%

THE ST FORMAT PD DIRECTORY

■ Here's a list of where to go for Public Domain software - demos, games and utilities for around £3 a disk! If you write to any of these libraries for a catalogue, enclose an SAE. ■ Budget games are available from all PD libraries indicated by a (B). Simply mention the disk number (above the review) when you order the disk.

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EVPD, 15 Cleve Road, Gotherington, Cheltenham, Glos GL52 4EW

FREAKS PDL, 29 Leap Valley Crescent, Downend, Bristol BS16 6TO (B)

IMAGEART, 19 Brenda Road, Tooting Bec, London SW17 7DD ☎ 081 767 4761

MELVILLE MARriot MUSIC MEDIA, 46 Market Square, Whitney, Oxon OX8 6AL ☎ 00993 779500

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PARADISE COMPUTERS, 11 Winfield

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SEVEN DISK, Digswell Water Lodge, Digswell Lane, Welwyn Garden City, Herts AL9 1BN

SOFTVILLE PD, 35 Market Parade, Havant, Hants PO9 1PV ☎ 0706 498199

SOLENT SOFTWARE, 53 Rufus Gardens, Totton, Hants SO4 3TA ☎ 0703 868882

STEVENSON PD, 14 Depot Road, Horsham, West Sussex RH13 5HA

TUMBLEVALE PDL, 6 West Road, Emsworth, Hants PO10 7JT ☎ 051 546 4640

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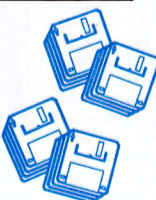
LYPD, 2,300 South Millway, Unit 424, Mississauga, Ontario, Canada L5L 2P5

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FOOTLOOSE AND

Between the big software houses and the Public Domain lies the specialist independent scene...

There are bundles of programs for your ST that don't get released by the software houses and aren't in the Public Domain. They include the full Shareware releases and programs that are being sold privately by their authors or through small companies. Often these programs are not released generally because they're so specialised that the takedown they're likely to have doesn't warrant the duplication and distribution costs. Since they slip between the two standard distribution methods, they don't get the reviews - and the publicity - they

deserve. Until now, that is, because from today onwards, the Indie reviews section sorts that out. We'll be covering particularly specialised programs, like the *Sales Controller* below which have been created with a specific audience in mind. *Sales Controller* was created by Andy Brown to satisfy the needs of a small company he was involved in, but it would be ideal for anyone involved in a similar business.

If you have a program that you think deserves an airing, send it to us at - Indie Reviews, *ST FORMAT*, 30 Monmouth Street, Bath Avon BA1 2BW.

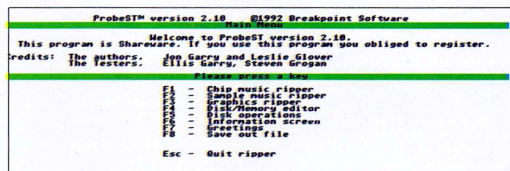
PROBE ST V2.0

MACHINE: ALL STs
FROM: BREAKPOINT SOFTWARE
PRICE: £2.95 OR £5.95
CONTACT: 49 MAIN STREET, FALLSWORTH, MANCHESTER, M35 9PD

into software to see how it is written, borrow sections of code and generally learn how to program code by studying how other writers have solved certain problems.

Others are more interested in "borrowing" the graphics and sound data contained in a program or a demo to use in their

Many beginners to the world of programming like to delve



■ The main menu of *ProbeST v2.0* doesn't look like much, but there are powerful functions tucked away under the bland function key options.

SALES CONTROLLER

MACHINE: ALL STs, HIGH RESOLUTION ONLY
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REGISTRATION FEE
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all goods' transactions so that you know exactly what stock you have, where it came from, where it's going to, how much each item costs and how much you are getting for it. *Sales Controller* provides all this and more.

The system basics

There are four main sections, file, invoice, stock and suppliers. The file menu deals with all loading and saving of data to disk, and also enables you to merge and extract individual files to and from disk. The settings menu is where you

enter your company details such as name, telephone number and VAT registration number. All this information is then printed on each invoice you produce.

The invoice menu provides comprehensive control over all aspects of customer invoices, many of the details of your original invoicing system, order numbers and the like, can be incorporated into *Sales Controller*. The sections interact, so you cannot raise an invoice for goods that are not in stock, and invoices can be quickly updated and edited so they are always up to date. You can also print out all your invoices and periodic statements.

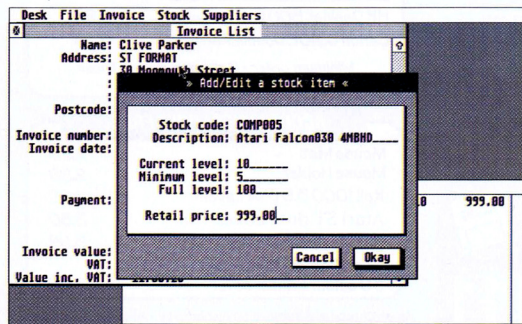
Stock can be updated as goods arrive, and it is automatically deleted as soon as invoices are raised. Each stock item has a unique code along with a full description, minimum stock level, full level and retail price. An excellent idea is the re-order option, using this function you can automatically print letters to suppliers ordering all items that have fallen below minimum stock levels.

Is it any good?

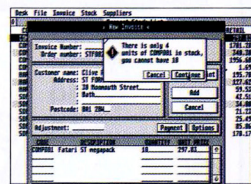
Sales Controller provides for every eventuality, from listing suppliers to printing invoices on Sage com-

If you've ever needed a professional standard stock control and invoicing system for your ST, take a look at *Sales Controller*, the only one of its kind.

The basic object of any stock control system is to keep track of

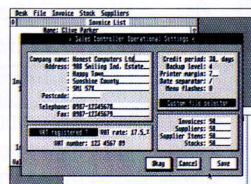


■ Adding new items to the stock list is simple - assign a code for the new item and enter a description and price.



■ If you try to raise an invoice for more items than you have in stock, the program politely informs you of the problem.

patible paper. For just £30 this program is as powerful as the stock control systems we've seen running on VAX mainframes, if you are running a small business and you have an ST, then get this software today.



■ Setting up your company details is a simple matter of filling in the settings form. This information is then printed on your invoices.

ST MAKES THE FRONT PAGE

With his most treasured possessions - a Mega ST and a mountain bike - Chris Turner set off for Zimbabwe to blaze new trails at Churchill School, Harare

In a tiny box room in the heart of a government secondary school in Harare, capital of Zimbabwe, great publishing things are happening. Despite fluctuating power supplies, paper shortages, permanently re-linked ribbons and a lack of funding, Churchill School is making its mark. The commitment of a small group of young Zimbabweans, along with a single ST and a dot matrix printer has led to success on a national scale.

Once upon a time...

It all started when Chris Turner set forth for a job teaching geography in a large urban school in Zimbabwe. His most important piece of luggage was his ST - the Mega's CPU was put in hand-luggage and the monitor and printer were sent by surface mail. Ten weeks later they were all re-united and everything worked. His Mega ST soon found its way into the school and a computer club was established.

The success

of the club did not even suffer from the fact that there was only one ST for over 50 members.

The Churchill Times

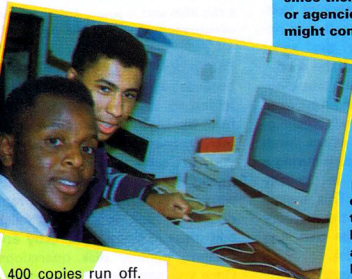
One of Chris's first objectives was to resurrect the school newspaper, *The Churchill Times*. Armed with his trusty Mega 2, Fleet Street Publisher 3, the school's old Epson printer and bags of enthusiasm, he gave the school newspaper a face-lift.

A team of reporters and sub-editors was selected and given the task of collecting material for the first issue. Intensive training on the ST, and on FSP3 in particular, took some time - six people around one machine is a little difficult.

The next task was to decide on a duplicating system so that their efforts could be read by the 1,200 pupils and staff. Since using photocopiers in Zimbabwe is very restricted and costly, the obvious solution was to return to stencil technology since you can cut stencils using a dot matrix printer. For a week they managed to improve the stencil quality to an acceptable level, and now have it down to a

Proud holders of the trophy for the Best Zimbabwean School Newspaper have the ST and their own hard work to thank.

fine art. The emulated PostScript output provided by FSP3 output the task easier - it looks great. The first issue of the magazine was small but beautiful - a mere four sides. The four stencils were taken to the duplicating room and



400 copies run off. As each issue is produced, the team learns about writing and layout, and, since each issue has to be self-financing, the team members also learn about print-runs and newspaper costings.

The school was so pleased with the final results they decided to enter *The Times* in the National Schools' Newspaper Competition, an annual event sponsored by the Zimbabwe Institute of Public Relations - *The Times* scooped the top two trophies for Best Overall Newspaper and Best Layout.

None of this could have been possible without Chris's ST, with its reliable hardware and excellent software.

PETER CRUSH

INSIDE STORY

Chris Turner reflects on the use of an ST in Africa

"PCs dominate both industry and commerce even in Zimbabwe. To help produce computer-literate students I managed to convince the Parent-Teacher's Association to buy two secondhand PCs (an Amstrad PC1512 and an ancient IBM). I would have preferred half a dozen STs but this is impossible in Zimbabwe since there are no ST dealers or agencies. Perhaps Atari might consider equipping our school with some old STMs?

"The impact that computers have had at Churchill School has been significant. As well as making all our pupils more aware of computers through the newspaper, we have interested art and science students by using programs like *Gem Paint*, *Molgraph*, *Hyperpaint* and *1st Word Plus*. We use word processors, databases, art packages, animation and the like. Some of the kids have started programming in BASIC and PASCAL, although this is limited because of the shortage of texts, manuals and updates.

"As well as producing *The Churchill Times*, the computer club also prints staff newsletters, invitations, sports programmes and teaching materials. In the long term we would like to operate as a resource centre for other local schools to come and produce their own school newspapers. We would also like to offer short introductory DTP courses to try to improve the standard of printed material locally.

Having fewer computers does mean that we have to use them more creatively and have to think more carefully about managing our time spent on them.

"When 40 young people turn up to a computer club meeting one afternoon hoping that they may be lucky enough to touch a computer, it makes all the effort worthwhile."

The Churchill Times team has its own office - more of a cubby hole really - and also their very own sought after press identification card! Here are a couple of the senior boys using Chris's well travelled Mega ST.



The Churchill Times isn't just a whole lot of fun, its main objective is to inform a large school community. Here are a couple of the senior boys whose jobs involve researching and writing stories.



The Churchill Times looks and feels like a real newspaper - there's no glossy paper in Zimbabwe. Each issue tries to carry cultural and educational information together with news and updates making it a good, interesting read. The

Times has run articles on pop music, diet, heart disease, AIDS awareness, and computers.



Go on, send them something

If you want to send small items like disks and programs make sure that the postage and value you mark on the Customs Declaration doesn't exceed £10. If you want to send larger items, mark them "Free Donation

to Churchill School" and precede it with a letter confirming this so the school can arrange a tax permit to import items free of tax and duty. Address: Chris Turner, Churchill High School, PO Box 8112, Causeway, Harare, Zimbabwe.

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When you buy your new Atari 520 or 1040ST-E computer from Silica Systems, we will give you an additional £324.75 worth of software FREE OF CHARGE, including some great entertainment and productivity programs. Plus, with every ST and TT, we will give you 16 nights holiday hotel accommodation for you and your family to enjoy a break.

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(SEE PANEL TO LEFT)

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ATARI ST

NEW! ATAR Falcon

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The new Atari Falcon 030 is now in stock. It is a powerful, versatile, multipurpose home computer, offering unmatched performance for its price. Included in its advanced specification are multiple co-processors for sound and graphics, true colour displays from a pallet of over a quarter of a million colours and 16-bit stereo sound input for speech recognition and sound sampling. These all combine to provide a new computer model of running unrivalled sound, graphics and multimedia applications. The Falcon is an ideal upgrade for Atari ST owners who are looking for a more powerful model, as it is compatible with the majority of ST application software. Call for details of availability.

Hardware:

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- DSP capabilities for voice recognition, speech synthesis and numerous audio special effects
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FAMILY CURRICULUM II

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SOFTWARE:
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Silica Productivity Pack £104.97
TenStar Games Pack £219.78
Total Value: £774.74
Less Pack Saving: £475.74
SILICA PRICE: £299.00

Hardware:
1040ST-E COMPUTER £299.99
8MHz 16-Bit 68000 CPU, 1Mb RAM, Mouse, TV Modulator, Internal PSU, 1Mb Disk Drive

SOFTWARE:
PRO II £150.00
Silica Productivity Pack £104.97
TenStar Games Pack £219.78
Total Value: £774.74
Less Pack Saving: £475.74
SILICA PRICE: £299.00

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Before you decide when to buy your new computer, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after you have made your purchase, when you may require additional peripherals and software, or help and advice with your new purchase. And, will the company you buy from contact you with details of new products? At Silica Systems, we ensure that you will have nothing to worry about. We have been established for almost 14 years and, with our unrivalled experience and expertise, we can now claim to meet our customers' requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now for our latest FREE literature and begin to experience the "Silica Systems Service".

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Which computer(s), if any, do you own? _____

79J

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SILICA SYSTEMS

FOR SOMETHING OUT OF THE ORDINARY...

Gavin fell out of bed on Wednesday morning and immediately wished he hadn't. His head wasn't working properly, he was late for work and he was still called Gavin. He picked the stale vomit from between his teeth and fell into a standing position.

The dog had decided that the paper looked better in 15 small pieces rather than one large one, which was fine except he didn't have a paper delivered. Skirting the paving slab balanced on his sofa, which had seemed so amusing last night, he tripped lightly into the bathroom and heavily into the bath.

At the hospital he told himself he'd laugh about this later, but for the moment decided to carry on groaning in agony. At least he had something to take his mind off his broken arm. Even if it was only a P45.

Back home he was cheered by a message from Cheryl on his machine. Cheryl, the love of his life. Cheryl, the platinum blonde. Cheryl, the platinum blonde, who "had to find herself" on a kibbutz for a year. Cheryl who had taken his entire collection of Brotherhood of Man albums.

When the paving stone connected with his foot, Gavin decided not to laugh about it all just yet. After all, there were better things to do. Thank God for PC FORMAT.

Get some fun out of your PC. PC FORMAT shows you the way. Next issue out Thursday 6 May.

THANK GOD FOR PC FORMAT





FEEDBACK

Hogwash, disagreement and bitter twistedness are here this month - join in the great debates - write to Paula Richards, ST FORMAT's Editor

All hogwash?

Do we really believe that Atari will sell 150,000 STs this year or can we presume that this is hogwash from a company that has as much commercial acumen as a truffle?

David Singleton
Southampton

stf: Depends what sort of truffle you're talking about, David. Presumably you're on about real truffles - you know, the ones like they have in A Year In Provence which cost a lot of francs per kilo, that grow underground and have to be snuffed out by a special truffle-hunting pig. These seem to me to have a lot of commercial acumen - they're difficult to find but are very valuable, creating, therefore, a lot of money for the minimum effort. Then there's "hogwash" - Oxford Dictionary defines this as "kitchen swill for pigs" - if this was food to feed the truffle-hunting hogs we can happily assume this to be top quality food to ensure the best truffle-hunting behaviour from the truffle-hunting pigs. So we can believe that Atari will sell 150,000 STs this year (and see page 48 for some even better reasons why you should) and that this is hogwash as long as you remember that hogwash isn't necessarily such a bad thing.

Join the club

Membership of a club is one of the most important accessories you can get your ST. Not only can you quickly improve your skills, but you can also widen your appreciation of the programs available.

The Cheshunt Computer Club is a friendly band of 20 ST enthusiasts that meet to demonstrate anything from flight simulations to the latest DTP programs, as well as to swap PD disks. It is our intention to formalise these demonstrations with the setting up of interest groups. If you live within reach of Cheshunt, call me on 0923 673719 for further details.

Derryck Croker
Watford

stf: Thanks for that - you surely can't be the only club out there - come on, let us know you exist!

Just an ST games reviewer?

Rob Mead's curious world view continues to fascinate me. I enjoyed reading his review of Nigel Mansell's World Championship (as I do all his reviews) but felt his opinions on the state of motor racing itself to be somewhat stunted.

Today's champs are, we are lectured, "faceless non-entities." I presume he is including famous firebrands like Senna and Prost in this ludicrous generalisation. And what of great characters like Piquet, and even, despite being a German, Schumacher. It may be true that Nigel Mansell is no Oscar Wilde, but then his job is not to sweet talk goggle-eyed TV viewers, but to drive cars quickly. And then in a state of hilariously misplaced nostalgia, Mead harks back to the "greats" like (wait for it) James Hunt. Are we to believe that Hunt is any more interesting than today's "non-entities?" I



■ Let's see how faceless today's champs really are. Well, part of Nigel's face is covered by a caterpillar - now that doesn't help.

think not. Perhaps Rob had better stick to what he's undoubtedly good at - reviewing ST games. Or can we look forward to a thesis on the ascent of man when Civilization 2 arrives?

Brian Little
Davertry

stf: I'm pleased to see that you were "fascinated" by Rob's "curious world view" in the way he approaches his game reviews - I for one believe that his writing is greatly enhanced by the way he brings real life to bear on ST games. And there's no getting away from the fact that personalities are important in making motor racing seem exciting, and there-

fore, interesting to viewers who, while they may be goggle-eyed, also provide an audience to be advertised to.

After all, cars racing round the track being controlled by remotes isn't as exciting as seeing drivers inside them taking their lives into their hands. If you don't like the person who's possibly going to die, you probably won't care whether he survives so you probably won't watch it. This would be no good to the advertisers and sponsors who finance the sport and enable it to exist.

Rob considers that James Hunt at the peak of his racing career expressed the spirit of what racing is all about - partying, drinking, women and fast cars (in that order) whereas Nigel Mansell somehow doesn't have the same charisma. He isn't frequently photographed with loads of supermodels and, as far as we can tell (although we must admit we haven't actually staked out Mansell's house to check) he spends many of his evenings at home pursuing a very sensible settled married life-style. Although



WHAT SORT OF STRATEGY IS THAT?

In STF 45 we printed a letter from Derek Whitely praising Atari's marketing strategy for the Falcon. We've had a huge response expressing a variety of opinions. Here's a small selection of the letters we received

I was glad to read Derek Whitely's views on Atari's strategy. I also feel that when the machine is ready, Atari will make sure that non-Atari users will get to know about it. I can understand the frustration of people who are desperate to get hold of the new machine, but if Atari were to release a bodged product with poor software support, the Falcon would sink, not fly. STF readers should be glad that Atari are apparently not going to repeat the daft mistakes they made with the introduction of the STE.

Matthew Cafferkey, Cambridge

Derek Whitely is a fool. Atari are incompetent and I am fed up with their attitude towards their most important asset - their customer base. If they can't control their manufacturers, if they can't predict

when their machines will be ready for release, if they cannot keep their retailers and support services and customers informed of the facts, then they deserve to go to the wall.

Steve Braund, Liverpool

Atari's marketing skills... what a joke! When was the last time Atari advertised in STF? I'm afraid I can't remember that far back.

Derek Whitely's letter shows why Atari's business reputation is abysmal. He seems to admire Atari in that they can sell a new computer in an old case! Why didn't Atari wait until they could design a new case? (And how much work does it actually take to build a new case?) This kind of marketing may be good for the business concerned, but it amounts to conning the public. By releasing only a handful of machines, Atari get the image of a company that can't deliver the goods.

Thushan Kumaraswamy, York

stf: OK! OK! So Atari don't exactly have the best image as far as their marketing abilities are concerned, but there are plans afoot to change all that - turn to page 48 to see how they're planning to do so.

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E & OE

"MINE IS SO MUCH BETTER THAN YOURS!"

Stuart Williams' letter about the people who use different languages in STF 45 really hit a nerve...

After reading Stuart Williams' letter I asked myself several times how anyone could be so stupid. What he fails to notice is that STOS is much more popular on the ST than C and that could possibly be the reason why there is regularly an ST Answers column for STOS. Why did he do the old trick of saying "C programmers

are better than STOS programmers?" I wonder if he is acquainted with all STOS users? I, for one, have never met him.

Ron Nussey, London NWS

Stuart Williams is probably right when he says C programmers enjoy a challenge, but as a STOS programmer I would disagree with many of the other things he says. I would love to program in C or assembly because I enjoy the pleasure of solving problems and seeing my

efforts work. However, as a father of three children, I don't get much spare time. STOS gives me the perfect opportunity to program, solve problems and produce acceptable results my kids can play with. STOS is a great language. All the add-ons and extensions make it the people's language. Don't knock it.

Barry Amor, Plymstock

stf: And that's enough of the "Mine's better than yours" argument, now you've both had your say.

this is admirable, it doesn't make him as appealing a media personality as James Hunt, for example. If you do find him irresistible, however, we can strongly recommend the game Nigel Mansell's World Championship.

As for Senna, Prost, Piquet and Schumacher, Rob's response is, "Well, they're not British, are they?" Perhaps not exactly in the European spirit of things, but undeniably true.

This is the battle of Omega

Following our review of KCS Omega in issue 44, we received a rather irate letter from **Chas Stoddard**, a professional programmer and composer who has spent over 12,000 hours using the program. Andy Curtis, our reviewer and professional MIDI composer responds;

CS: "It is a shame that Andy Curtis is so dismissive of KCS Omega in his review. If he had spent more than five minutes examining how the programs go together and not assumed he was up against a Notator or Cubase clone he would have understood a little better..."

stf: Since KCS costs £300 you have a right to know what this program is like compared to other packages at that price level - although Cubase and Notator are completely different they do fall into the same price category. KCS is therefore open to criticism on a higher level than a sequencer like Prodigy, costing £130.

CS: "He complained that there were no nice bargraph-style meters showing the current MIDI activity. This is done for a very good reason - it takes processing time to create these displays, time which is better spent on ensuring record/playback fidelity. This means KCS has an enviable reputation for timing accuracy."

stf: The importance of the user interface on any program should never be under-estimated. If programs had no screen display at all they would be totally useless, how-

ever well they worked. The bargraph-style indicators are great for showing when a track is actually playing notes and the density of those notes. In any sequencer, the display always takes second place to the working of the program and should never interfere with it. Programs like Virtuoso give you 480 pulses per quarter note yet still give excellent MIDI indicators.

CS: "He finds the time for a totally pointless observation about the maximum tempo but dismisses the Programmable Variations Generator to the briefest of mentions."

"His comments... suggest he managed to make a pig's ear out of some music he was creating."

stf: The point here is that the tempo provision in the KCS is, as far as I know, unique. 999 beats per minute must be a fascinating speed to run a piece of music at! While the Programmable Variations Generator is a powerful tool, there wasn't the space to include a full description of its features.

CS: "His comments to the prospective buyer about the vagaries of Open mode are superfluous and suggest that he managed to make a pig's ear out of some music he was creating. Remember the old computing adage - garbage in, garbage out."

stf: I made these comments about the Open mode of the KCS after following the manual's instruction to strip out controller information to make the display clearer and easier to follow. What it failed to mention was that this process is destructive and all pitch bend, sustain, aftertouch and modulation wheel info has to be added again by hand afterwards - so I encouraged the prospective user to be aware of this.

CS: "His final sentence irks the most - the implication is that speed is of the essence when producing music... but to associate speed with creative flow is dangerous and misguided. Perhaps he should enlighten us mere mortals as to what creates 'creative flow.'"

stf: At no time and in no way did I make reference to speed of composition being associated with creative flow. I would define a sequencer's ability to aid the creative flow by its degree of transparency in use - that is, the more intrusive the software, the poorer the sequencer.

CS: "KCS is currently the only sequencer capable of handling

many of the requirements of today's serious music, such as polyrhythm, microtonality, serial techniques, irregular or asymmetrical notation systems, aleatoric and stochastic music and a whole panoply of others."

stf: This statement confirms my belief that the KCS has an appeal for specialist music requirements. I am truly happy that the KCS suits Chas Stoddard's intricate needs, I can make an educated guess that these features are rarely on the list of most sequencer buyers.

Write to Paula Richards, The Editor, Feedback, ST FORMAT, 30 Monmouth Street, Bath, Avon BA1 2BW.

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We want to know what you think of ST FORMAT - it may be Britain's best-selling ST magazine, but it doesn't mean we're perfect. Fill in this coupon and post it to June Reader Survey, ST FORMAT, Future Publishing, Freeport, Bath, Avon BA1 2BW - you don't even need to buy a stamp.

How much do you like this issue?

- ☐ It's great! ☐ It's pretty good ☐ It's alright
☐ It's lousy ☐ It's absolutely terrible

Does this month's feature on adventure games make you want to escape into a fantasy world generated by your ST?

- ☐ Yes! I'm already wearing my cod-piece. ☐ I'm thinking about it
☐ No, I'm not interested in it at all

Is there anything missing in this issue as far as you're concerned?

If so, what? _____

What do you most like about this month's issue? _____

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Do you have any suggestions for future features or improvements to ST FORMAT? _____

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THIS IS YOUR VIEW

We asked you what you wanted from ST FORMAT - and these are your desires...

Many thanks to everyone who replied to our questionnaire a couple of issues ago. We had hundreds of responses and have been slaving over them analysing and examining them for the past few weeks and have come up with plenty of interesting facts and figures. In your additional comments there were some real gems of ideas which we are looking to implement in the near future. Some of the changes we've incorporated already as a direct response to your requests - so, you see, your views do count!

Who are you?

Let's talk about you first of all. You're most likely to be male - 97% of you are and that probably also explains why the Summer School cover girl of issue 38 was so popular. Typical. 66% of you are over 19, so, while you probably enjoy having a quick blast on your ST (89% of you said you used your ST for games and 83% of you expect to be buying ST games in 1993) you're likely to see your ST as a tool for serious work, not just a games machine.

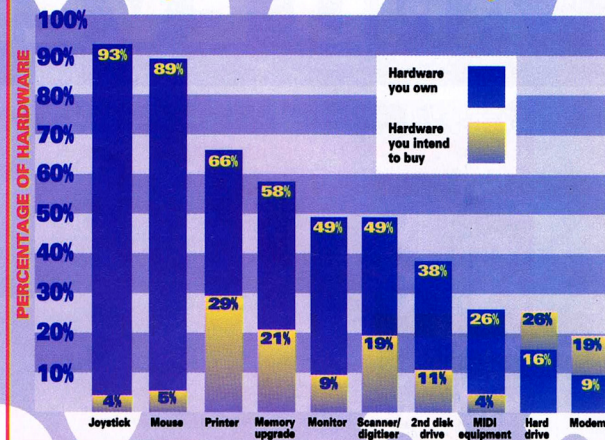
You can probably afford to buy most of the software and hardware you want, since 36% of you earn over £10,000 a year - that's up on last year which is pretty incredible considering the state of the economy. Looking at the chart opposite you can see that you've been using your spending power

to its utmost, many of you having made hardware purchases over the last year. For example, 16% of you own a hard drive - that's compared to only 10% last year; 26% of you plan to buy one during the next year. Printers are another item which you've been spending your money on - and it looks as if you'll continue to do so - 66% of you own a printer compared to 52% last year. In the next year it looks like almost all of you will own a printer since a further 29% of you intend to buy one.

Not just the basics

We are pleased to see that most of you - 51% of you, in fact - have double-sided drives and over 1MByte of RAM. So you can take full advantage of all this memory, we'll be continuing to put 1MByte programs on the Cover Disk - not only 1MByte programs, of course, but just enough to whet your appetite. Check out *Legends of Valour* this month. 53% of you have also got an STE of some description - so we'll be taking a look at some of the best games that take advantage of the enhanced graphics and sound you can get on your STEs. While virtually all of you are using your STs for a variety of applications, many of you are looking further afield as well, towards the Falcon - a staggering 29% of you intend to get your cash out and spend your dosh on this wonder machine. This month marks the start of our special Falcon section

Hardware you own and intend to buy



(see page 79) where we're going to be taking a look at the software that's available for the Falcon - just a taster of the delights to come.

Do we satisfy you?

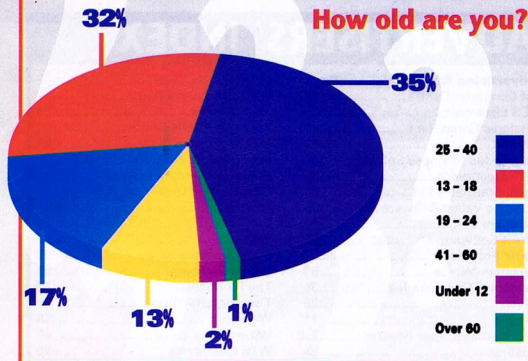
Yes - we do, although most of you want more or the same amount of everything in the issue. Despite devoting six pages a month to techie hints and tips in ST Answers 57% of you still want more - that's up on last year's 46% of people wanting more ST tips. This could indicate that you're slightly more technically-minded than you used to be - but then 43% of you want more Gamebusters and 40% want

more game reviews. You're also hungry for news and previews (54% and 47% respectively). With 50% of you wanting more on the PD we've decided to look at cheap software but take a different stance on it - check out page 96 where we start our "indies" section.

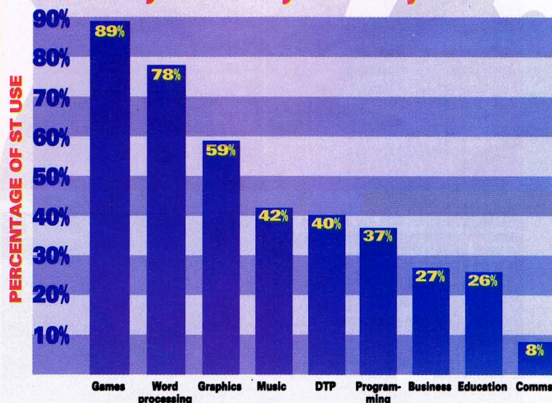
Keep us informed!

If there are any other comments you'd like to make, write to the Editor at Feedback, ST FORMAT, 30 Monmouth Street, Bath BA1 2BW or fill out the coupon we run every month there. We're here to give you what you want - and if you don't tell us, we won't know. **stf**

How old are you?



What do you actually do with your ST?



LIFE, THE UNIVERSE AND EVERYTHING

THE ST FORMAT BBS DIRECTORY

All of these boards support the ST or at least have ST support areas. All boards operate at a minimum speed of 300 baud between 9pm and 8am daily. If the details of your board are incorrect, or you would like your BBS included then please send full details (including times and baud rates) to: BBS Directory, Clive Parker, ST FORMAT, 30 Monmouth Street, Bath BA1 2BW.

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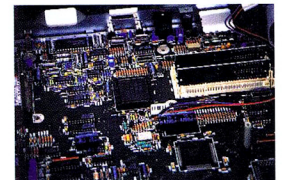
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A/B Boot switch	£4.99
TOS 2.06 + Switch STFM	£65.00
TOS 2.06 + Switch STE	£65.00
Courier Pickup	£11.00
Courier Return	£7.00

Phone for price and availability of ST spares

Monitors



Philips 8833 MkII	£229.99
Includes 12 Months on-site warranty (Mainland UK) and free Lotus Turbo Challenge II game.	
Hi-Res Mono Monitor	£139.99
High quality 14" VGA Monitor with ST adaptor. Fully compatible with all ST Hi-Res Programmes	
Philips 15" FSTTXX TV	£259.99
Fully Remote control 60 channel. Fast text TV with Scart input for near monitor-quality display.	
Colour SVGA Monitor	£250.00
High quality Colour SVGA Monitor 28 dot pitch. For use with Falcon.	
Falcon VGA Adaptor	£9.99
Falcon ST Monitor Adaptor	£9.99
Philips SCART to ST/STE	£9.99
8833 Mk II to ST/STE	£9.99

Printers



Star	
Star LC100 Colour	£165.00
Star LC20	£124.00
Star LC24/100 Mono	£179.00
Starjet SJ48 Bubblejet	£210.00
SJ48 Sheet Feeder	£55.00
SJ48 Ink Cartridge	£19.00

Citizen	
Citizen Swift 240 Colour	£270.00

Hewlett Packard	
HP Deskjet 500	£339.00
HP Deskjet 550 Colour	£580.00

Lasers	
Seikosha OP104	£549.00
● 512K RAM (Exp to 2.5Mb)	
● HP Laserjet IIP emulation	
● 14 resident fonts	
● Centronics/RS232C/RS422	
● 12 months on-site warranty	

Seikosha 512k RAM upgrade	£69.00
Seikosha Toner (2 units)	£19.00
Seikosha Drum Unit	£79.00
Ricoh LP1200	£759.00
Add £3 for Centronics cable and £7 for next working day courier delivery	

Power Scanner

- Up to 400 DPI
- Real-time greyscale scanning
- Auto scan rate detect
- Monochrome text or 16 greyscale levels
- Full image and clipboard editing features
- Scan join feature for taking wide scans
- Cut, paste, magnify, flip, rotate, invert, crop, edit and many more editing features
- Works in all three resolutions
- Save a variety of picture file formats
- High resolution printer driver with more drivers forthcoming
- GEM menu and fast icon driven controls
- Keyboard shortcuts

Power Scanner£99

Ram Expansion

- No soldering required
- Expand to 2MB or 4MB
- Plugs directly inside the ST
- Full fitting instructions
- Uses latest capacity RAM chips

2MB RAM Expansion£99

4MB RAM Expansion£169

1MB SIMM for STE£25

512K RAM STFM£45

New Blitz Turbo

- Back-up your disks at lightning speed
- Copies from the internal to the external drive
- Cleverly by-passes your ST's disk controller chip
- Back-up an ST disk in around 40 seconds
- Now you can switch between your disk drive and Blitz Turbo without disconnecting your Blitz interface

New Blitz Turbo£25

Original Blitz Turbo£15

Hard Drives

Series 900 HD

- Buffered thru' port
- Optional battery backed clock
- High speed 20ms seek rate
- Write protect switch, protect your valuable data
- Power supply
- ICD interface and utility disk

Series 900 40MB£329

Series 900 100MB£479

Add £10 for clock to be fitted to Series 900 hard disk

Special Offer

When you purchase this hard drive you can buy Lattice C v5 for£60

Floppy Drives

PC720B



- Virus blocker (prevents viruses)
- Built-in Blitz Turbo
- Boots from drive B
- 12 month warranty

PC720B£65

PC720I

- Atari internal disk drive£39.95

PC7200I

- Official Atari internal disk drive£45
(No case cutting but must be small button version)

PC720P

- Disk drive inc. power supply unit£55

Drive Accessories

Maxell Multi-Colour disks (10)£9.95

Floppy disks bulk supplied£POA

Boot from Drive B

If you have an internal drive that is not compatible with 'Boot from drive B' this cable will solve your problem£9.95

Optical Hard Drive

- 128MB on one optical disk
- Read and write optical disk
- 40ms running speed
- High power cooling fan
- 25-way and 50-way SCSI ports
- SCSI ID switch

(The Link™ must be used to connect drive to Atari computer)

128MB External optical drive£999

128MB Optical drive & The Link™£1068

128MB 3.5" Optical disk£39.95 each

Software

Lattice C v5.0	£89
Devpac v2.0	£29
HiSoft C	£29
Proflight	£29
Harlekin	£45
Werks	£24
Knife ST	£29
PC Ditto	£29
Neo Disk v3.0	£34
Devpac v3.0	£69.95

Philips CM8833 MK2

- With cable
- On-site maintenance

CM8833 MK2£239

POWER

Power Computing Ltd
Unit 8 Raiton Road
Woburn Road Ind. Estate
Kempton Bedford
MK42 7PN



Tel 0234 843388 Fax 0234 840234

Specifications & prices are subject to change without notice
All trademarks acknowledged, VAT included

ICD

The Link™

- External SCSI host adaptor
- Connect Atari ST to external SCSI devices e.g. External HD, floppy drives, Optical drives, CD ROM drives which were originally designed for the Apple Mac, IBM PC, Commodore Amiga, NeXT Atari TT, Falcon
- Atari ST must have a DMA port
- Plug-in and go
- Software included
- Compact interface
- 63 x 76 x 19mm in size
- No power supply needed

The Link™£69.95

Printers

All printers include cables and next day delivery

Star Printers

LC20	£139
LC100 colour	£165
LC200 colour	£195
LC 15	£229
LC24-100	£185
LC24-200	£225
LC24-200 colour	£279
Laser LS-5	£699
Laser LS-5EX	£899
Laser LS-5TT	£999
SJ-48	£229

Epson Printers

Laser

EPL-4000	£639
EPL-4300	£799
EPL-8100	£1349

Inkjet

SQ-870	£509
SQ-1170 (132 column printer)	£629

Dot Matrix

LQ-570	£289
LQ-1070 (132 column printer)	£449
LQ-100	£209
LX100	£189